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Distribution and Importance of Phytoplankton in the Atchafalaya Basin

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This report presents the species and abundance of phytoplankton in the Atchafalaya Basin. From 86 phytoplankton samples examined, 107 genera and 287 species of algae were identified. Occurrence and dominant occurrence of phytoplankton genera and species are listed. The Nygaard's Trophic State Index (Nygaard 1949), Palmer's Organic Pollution Index (Palmer 1969), as well as species diversity and abundance indices are included. Also, study areas inside and outside the Basin were compared and contrasted for chemical, physical and biological characteristics. From the above data the following conclusions were made: 1) phytoplankton play a minor role in the overall productivity of the Basin proper due to the high concentration of suspended sediments in the water, 2) phytoplankton production was nearly an order of magnitude greater in areas studied outside the Basin than within the Basin, and 3) diatoms and flagellates were the dominant algal groups within the Basin while flagellates and blue-green algae were the dominant algae groups outside the Basin proper.

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DISTRIBUTION AND IMPORTANCE OF PHYTOPLANKTON IN THE ATCHAFALAYA BASIN

by

Stephen C. Hern, W. D. Taylor, L. R. Williams,
V. W. Lambou, M. K. Morris*
F. A. Morris* and J. W. Hilgert*

Water and Land Quality Branch
Monitoring Operations Division
Environmental Monitoring and Support Laboratory
Las Vegas, Nevada 89114

*Department of Biological Sciences
The University of Nevada, Las Vegas
Las Vegas, Nevada 89154

U.S. ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF RESEARCH AND DEVELOPMENT
ENVIRONMENTAL MONITORING AND SUPPORT LABORATORY
LAS VEGAS, NEVADA 89114

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FOREWORD

Protection of the environment requires effective regulatory actions which are based on sound technical and scientific information. This information must include the quantitative description and linking of pollutant sources, transport mechanisms, interactions, and resulting effects on man and his environment. Because of the complexities involved, assessment of specific pollutants in the environment requires a total systems approach which transcends the media of air, water, and land. The Environmental Monitoring and Support Laboratory-Las Vegas contributes to the formation and enhancement of a sound integrated monitoring data base through multidisciplinary, multimedia programs designed to:

> develop and optimize systems and strategies for monitoring pollutants and their impact on the environment
>
> Demonstrate new monitoring systems and technologies by applying them to fulfill special monitoring needs of the Agency's operating programs

This report presents the species and abundance of phytoplankton in the Atchafalaya Basin. The Nygaard's Trophic State Index (Nygaard 1949), Palmer's Organic Pollution Index (Palmer 1969) as well as species diversity and abundance indices are included. These data can be used to biologically characterize the Atchafalaya Basin, and to formulate plans to minimize the environmental impact of hydrological modifications. This report was written for use by Federal, State and local governmental agencies concerned with water quality analysis, monitoring and/or regulation. Private industry and individuals similarly involved with the biological aspects of water quality in the Atchafalaya Basin will find the document useful. For further information contact the Water and Land Quality Branch, Monitoring Operations Division.

George B. Morgan

George B. Morgan
Director
Environmental Monitoring and Support Laboratory
Las Vegas

PREFACE

The Atchafalaya Basin is an area of natural importance which provides extensive natural resources as well as habitat for rare and endangered species. However, the Basin must also serve as a floodway for the lower Mississippi River. To meet the need for flood control, the Army Corps of Engineers has designed a massive channelization project.

In response to a request by the Governor of Louisiana and a joint United States Congressional Resolution, the Environmental Protection Agency, the Army Corps of Engineers, and the Department of Interior are conducting a water and land quality study in the Atchafalaya River Basin. The study's objectives are to assess the potential impact of a massive channelization project proposed by the Corps and to develop alternative land and water management plans, which will accommodate flood flows and maintain an acceptable level of environmental quality for the Atchafalaya Basin.

EPA's monitoring study attempts to define general water quality in the Basin, including the distribution of pesticides, and examines the productivity and energy export of key habitats and the contribution of these to Basin and estuarine productivity.

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INTRODUCTION

The collection and analysis of phytoplankton data were included in the Atchafalaya River Basin Water and Land Study in an effort to determine relationships between algae and productivity in key habitat types.

During 1974 and 1975, 120 stations were sampled in the Atchafalaya Basin; samples from 26 of these were selected for phytoplankton analysis. From 86 samples examined, 287 algal species and varieties were identified and enumerated. Also the National Eutrophication Survey collected phytoplankton data for Lake Verret during the spring, summer, and fall of 1974 (Lambou, et al., in preparation).

This report presents the species and abundance of phytoplankton in the Atchafalaya Basin. The Nygaard's Trophic State Index (Nygaard 1949), Palmer's Organic Pollution Index (Palmer 1969), as well as species diversity and abundance indices are included.

CONCLUSIONS

The following were concluded from this study:

1. Phytoplankton play a minor role in the overall primary productivity of the Basin proper due to the high concentration of suspended sediments in the water.
2. Phytoplankton production was nearly one order of magnitude greater in areas studied outside the Basin than within the Basin.
3. The inlet waters had significantly lower phytoplankton production than the rest of the Basin proper.
4. There are at least 107 genera and 287 species of algae present in the Basin based on 86 samples.
5. Diatoms, particularly centric diatoms, constituted the most abundant algal group in the study.
6. The five genera which contributed dominant constituents, in order of importance, are *Melosira*, *Cryptomonas*, *Oscillatoria*, *Skeletonema*, and *Nitzschia*.
7. Diatoms and flagellates were the dominant algal groups within the Basin proper.
8. Flagellates and blue-green algae were the dominant algal groups outside the Basin proper, with diatoms also contributing significantly to the flora.

DESCRIPTION OF BASIN

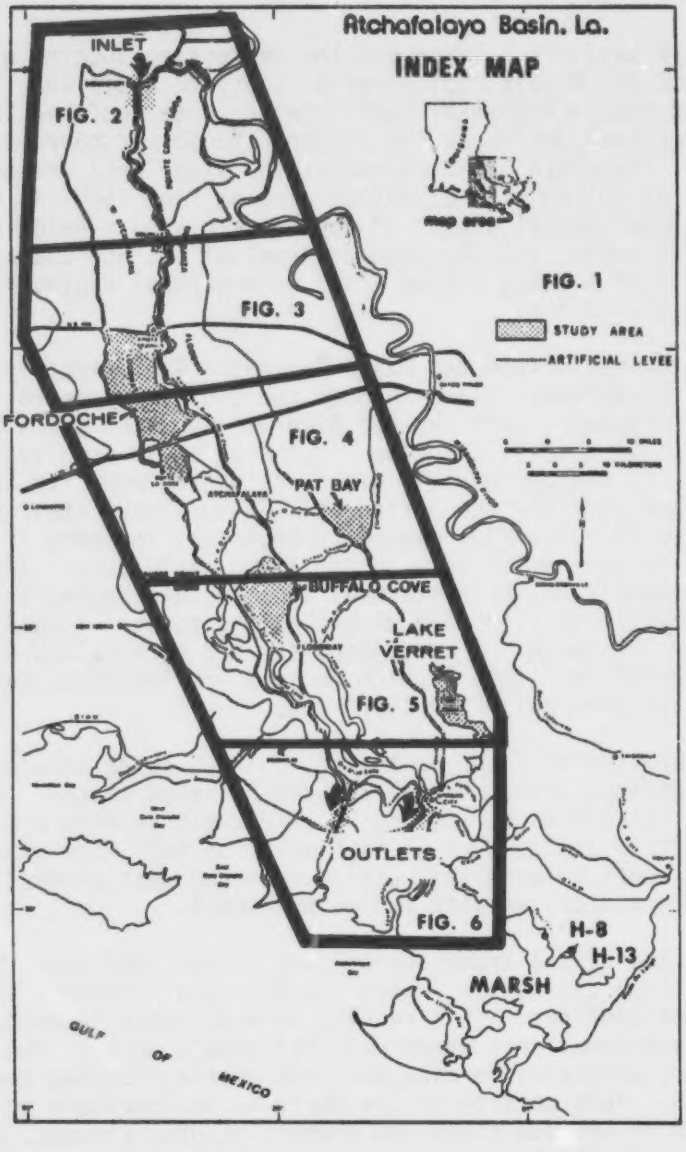
The Atchafalaya Basin is a large shallow depression located within the deltaic plain of the Mississippi River in southern Louisiana (Figures 1-6). It comprises a 4662 square kilometer (km^2) lowland area confined between natural levee ridges that delineate the present and former courses of the Mississippi River. The overall dimensions of the study area are approximately 72 kilometers (km) by 193 km with elevation ranging from about 15 meters (m) to sea level. Maximum channel depths of approximately 49 m below mean sea level occur in scour pools, but the trunk channel of the Atchafalaya River is more typically 12 to 24 m below ground level with natural depths in lakes and bays being about 0.6 to 2.5 m.

Water enters the Basin from two major sources. Approximately 30 percent of the Mississippi River water flows through the Old River control structure which eventually anastomoses with the Red River to form the mainstem of the Atchafalaya River. The Atchafalaya River discharge shows both seasonal and annual variation. The average monthly discharge hydrography for the Atchafalaya River at Simmesport for the period of 1963-1971 indicates the seasonality of flows (Figure 7). The flow generally begins to increase in December or January and crests in the period between April and early June. The flows normally drop off sharply to their seasonal lows in late summer and early fall. The cyclic nature of flow also describes the typical annual regime of flooding for the entire basin. A hydrograph for the Atchafalaya River at Simmesport is presented in Figure 8 which encompasses the time-frame in which phytoplankton samples were collected (1974-75).

In the upper one-third of the Basin, the channel-levee complex consists of a single, well-defined trunk channel bounded by levee ridges. Stage fluctuations are great but overbank flooding is infrequent in this area. Basically, flooding of this area occurs at high water periods when water "stacks up" and then flows north between the outside east and west protection levees and the inner levees associated with the main channel.

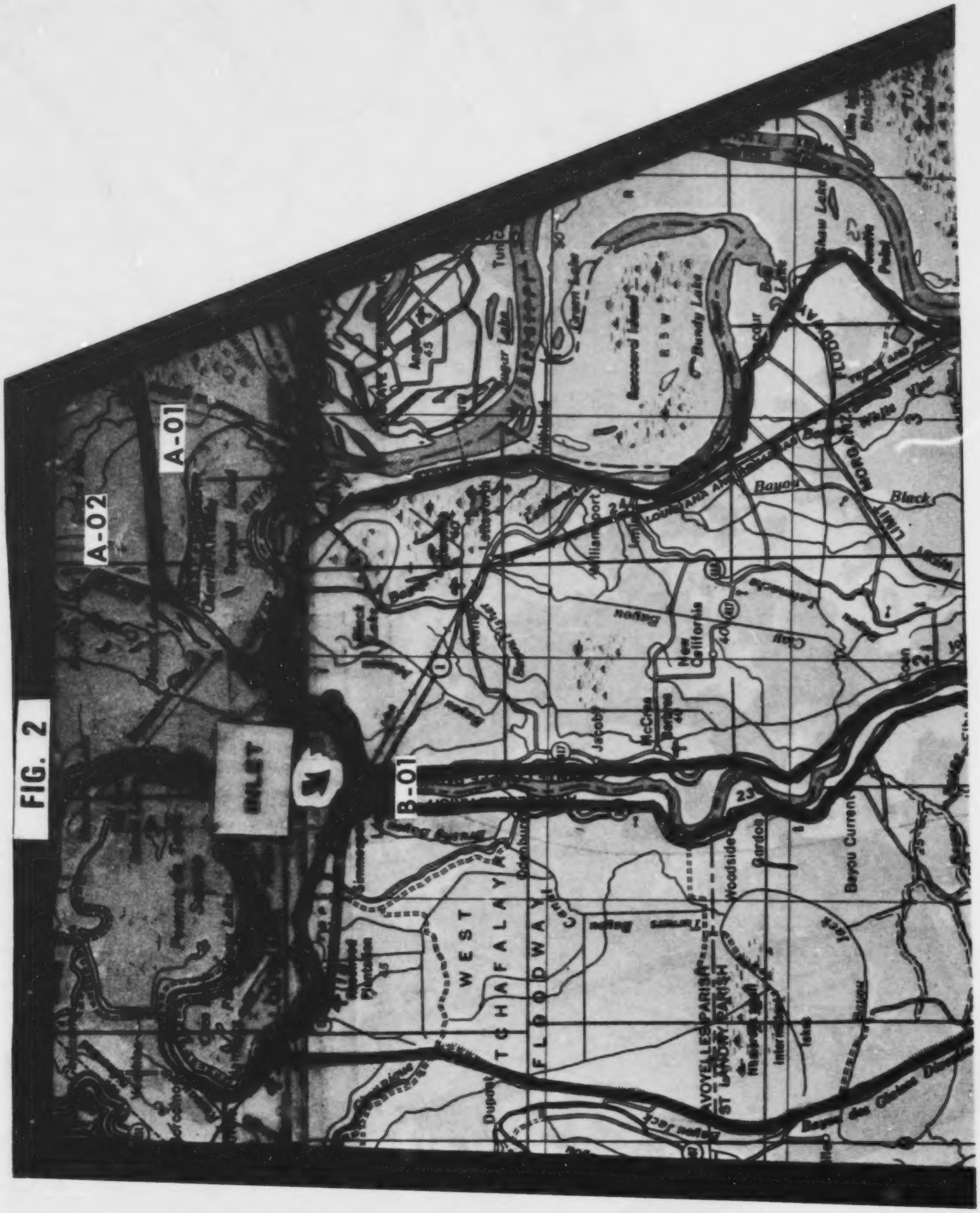
In the middle Basin, the trunk channel and levees lose their identity as they enter a very large depression, where the flow and sediments of the system are no longer confined. This results in a decrease in velocity and an increase in cross-sectional area where velocity losses occur. The stream deposits sedimentary particles forming bars and shoals, forcing the river into a branching pattern. This portion of the Basin is an intricate mosaic of shallow water lakes of various sizes and shapes, bayous, sloughs, channels, and distributaries. In the lower portion of the Basin, the river channel regains its identity. The total river flow, combined with rainfall from within the Basin, passes through two outlets, the lower Atchafalaya River outlet at Morgan City and the Wax Lake outlet.

Extensive swamps and freshwater-to-saline marshes characterize the Atchafalaya complex below Morgan City. The marshes and swamps have an intricate tidal-drainage network dependent upon local runoff and tidal conditions.


Atchafalaya Basin, La.
INDEX MAP
INLET
FIG. 2
FIG. 1
STUDY AREA
ARTIFICIAL LEVEE
FIG. 3
FORDOCHE
FIG. 4
PAT BAY
BUFFALO COVE
LAKE VERRET
FIG. 5
OUTLETS
FIG. 6
H-8
H-13
MARSH
GULF OF MEXICO

Figures 1 - 6. Major study areas and station locations in the Atchafalaya Basin.

FIG. 2


INLET
A-01
A-02
B-01
WEST ATCHAFALAYA FLOODWAY
MORGANZA FLOODWAY
AVOYELLES PARISH
ST. LANDRY PARISH
New California
Woodside
Bayou Current
Jacoby
McCrea
Shaw Lake
Bundy Lake
Raccourci Island
Dupont
Bayou des Glaises Diversion

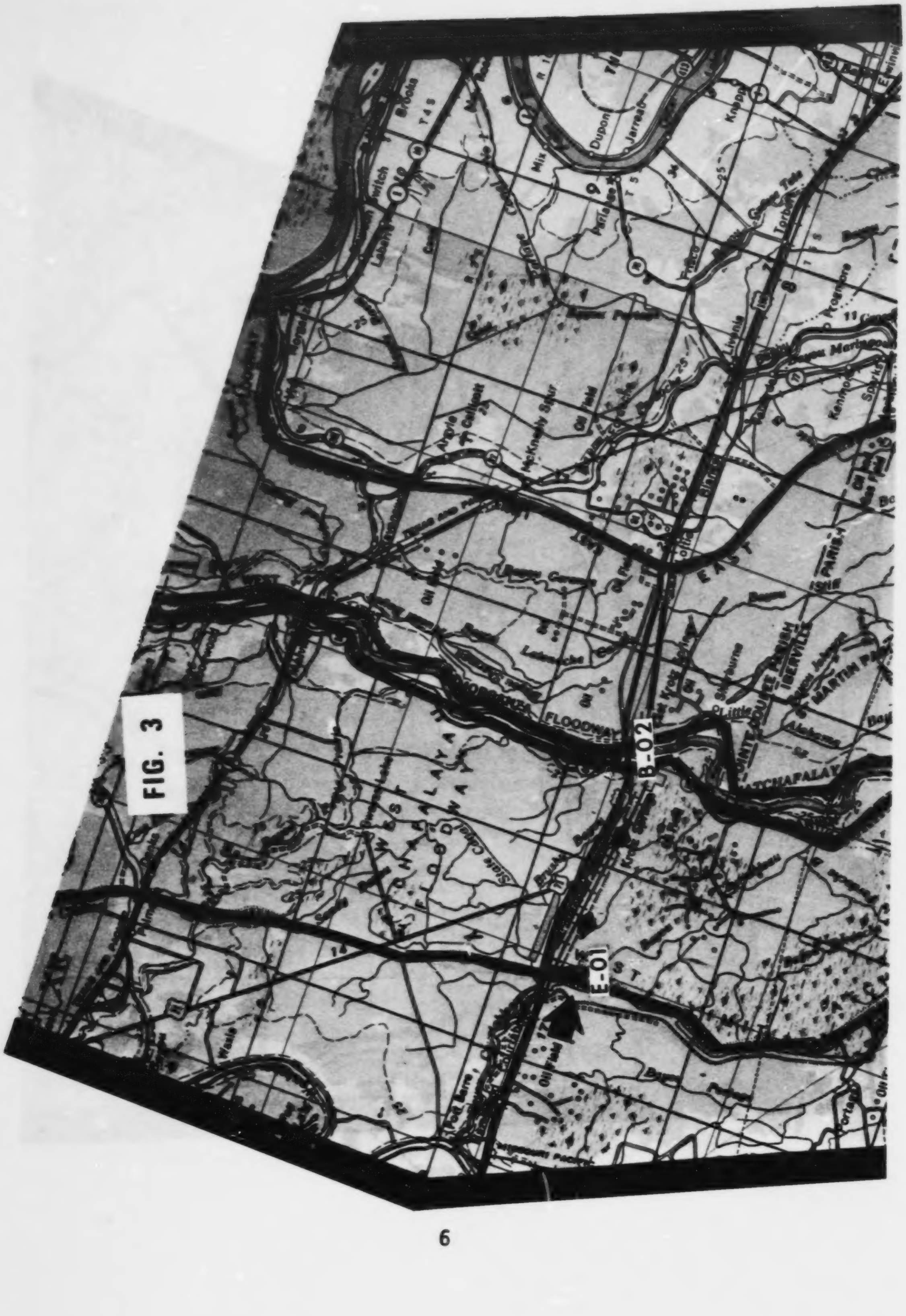

B-02
E-01
FLOODWAY
WEST
EAST
ATCHAFALAYA

FIG. 3

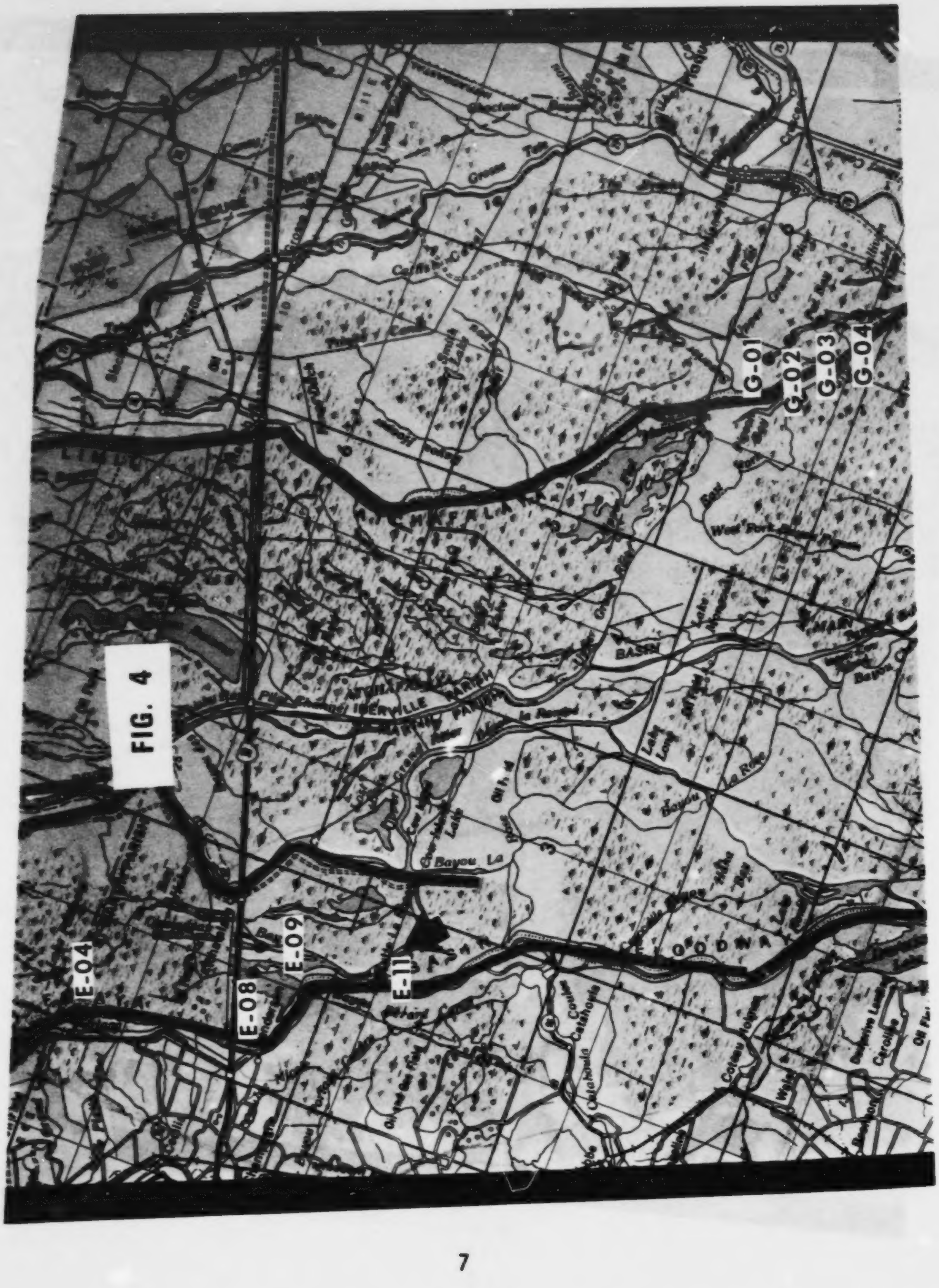


FIG. 4

G-01
G-02
G-03
G-04
E-04
E-08
E-09
E-11
ATCHAFALAYA
BASIN
IBERVILLE PARISH
Bayou La

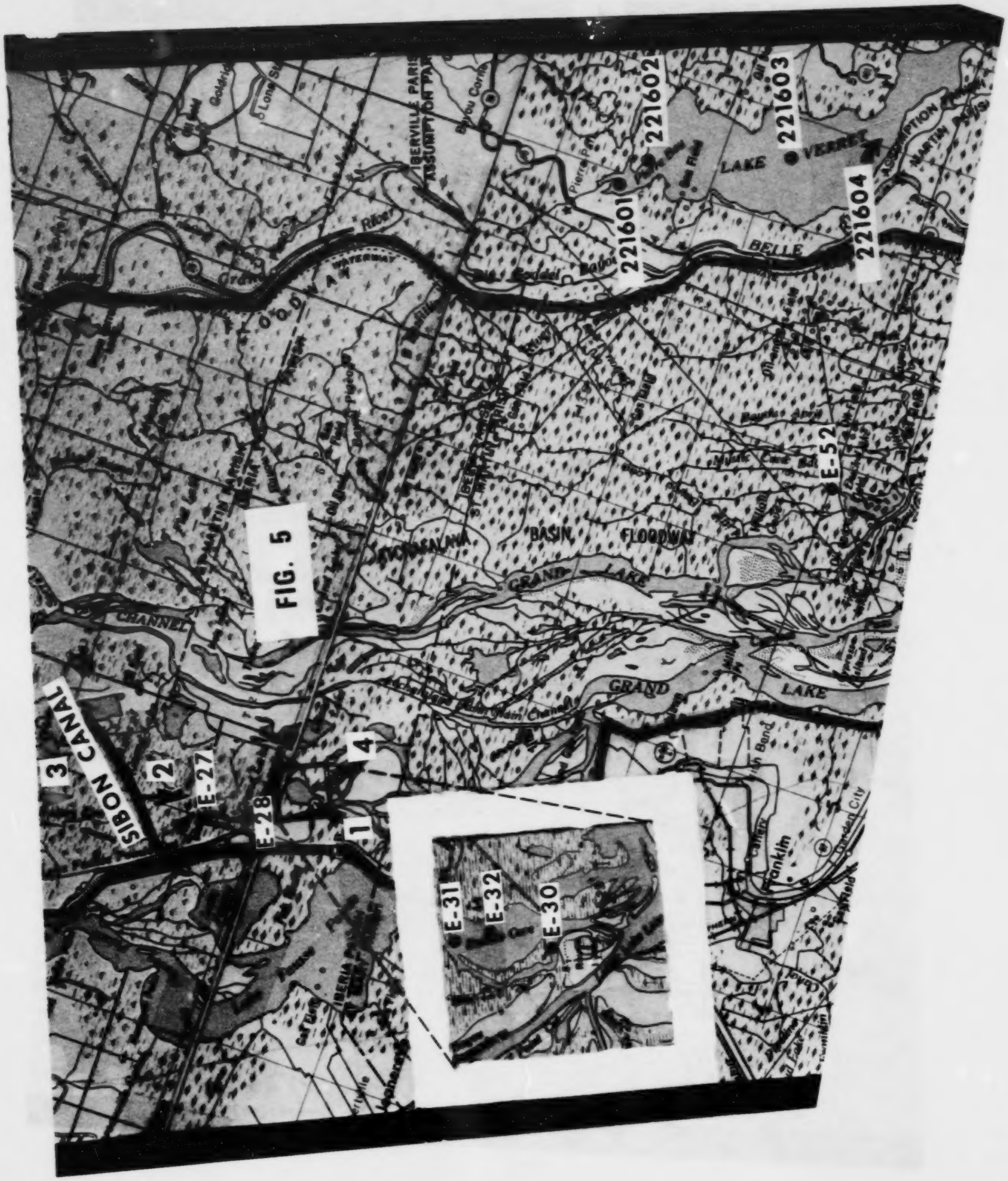

221601
221602
221603
221604
LAKE VERRET
BELLE
E-52
ATCHAFALAYA BASIN FLOODWAY
GRAND LAKE
GRAND LAKE
CHANNEL
SIBON CANAL
3
2
E-27
E-28
4
1
E-31
E-32
E-30
Franklin
Garden City
IBERVILLE PARISH
ASSUMPTION PARISH

FIG. 5

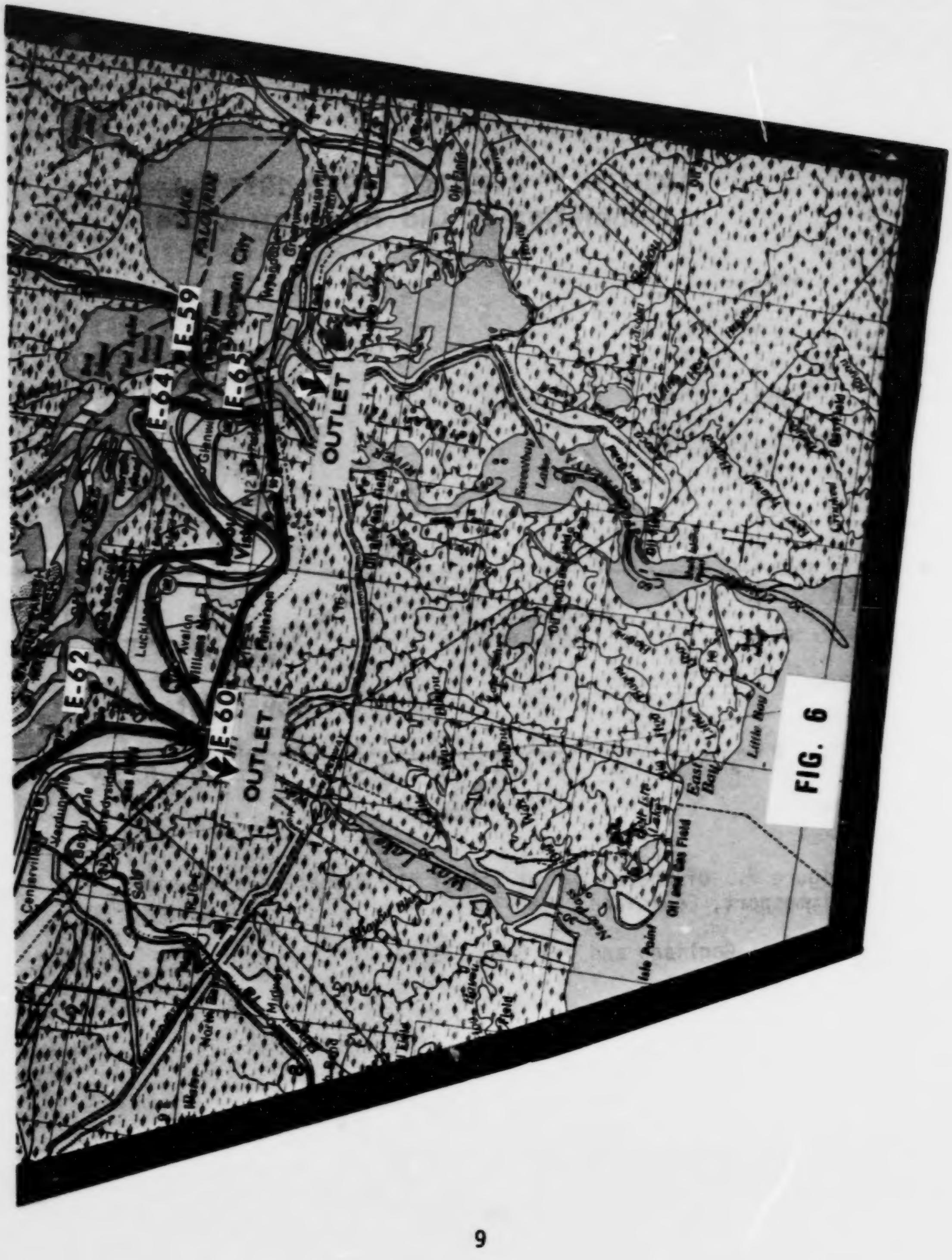

E-59
E-64
E-65
E-62
E-60
OUTLET
OUTLET
LAKE PALOURDE
Morgan City

FIG. 6

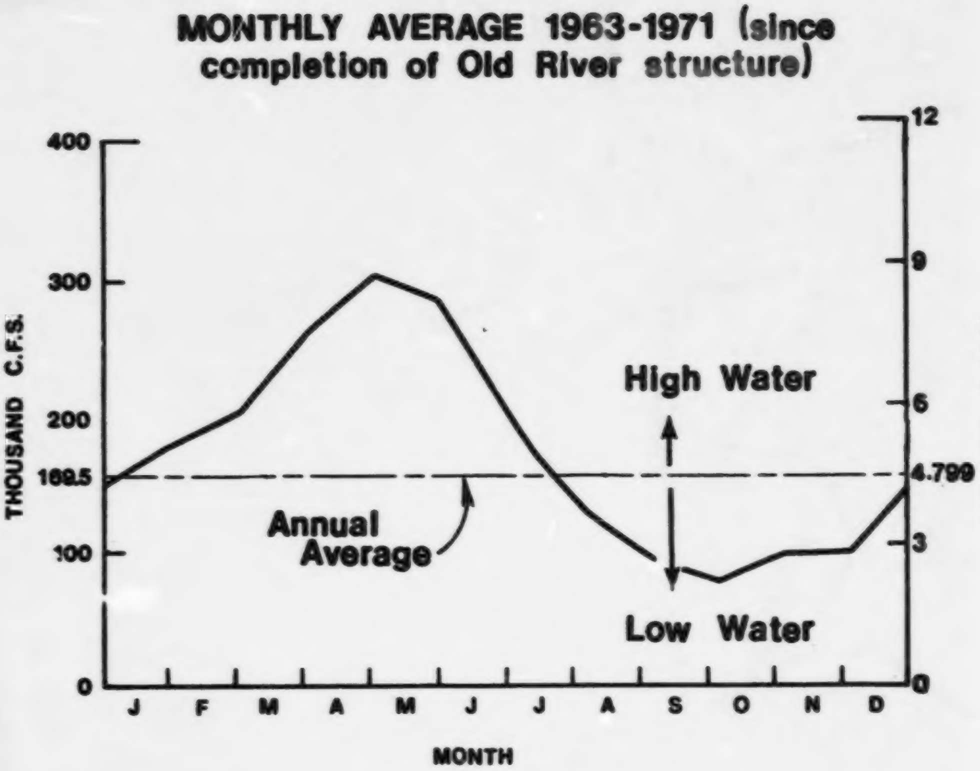


Figure 7. Discharge hydrograph of the Atchafalaya River at Simmesport, Louisiana, 1963-1971.

Source: Gagliano and van Beek (1975).

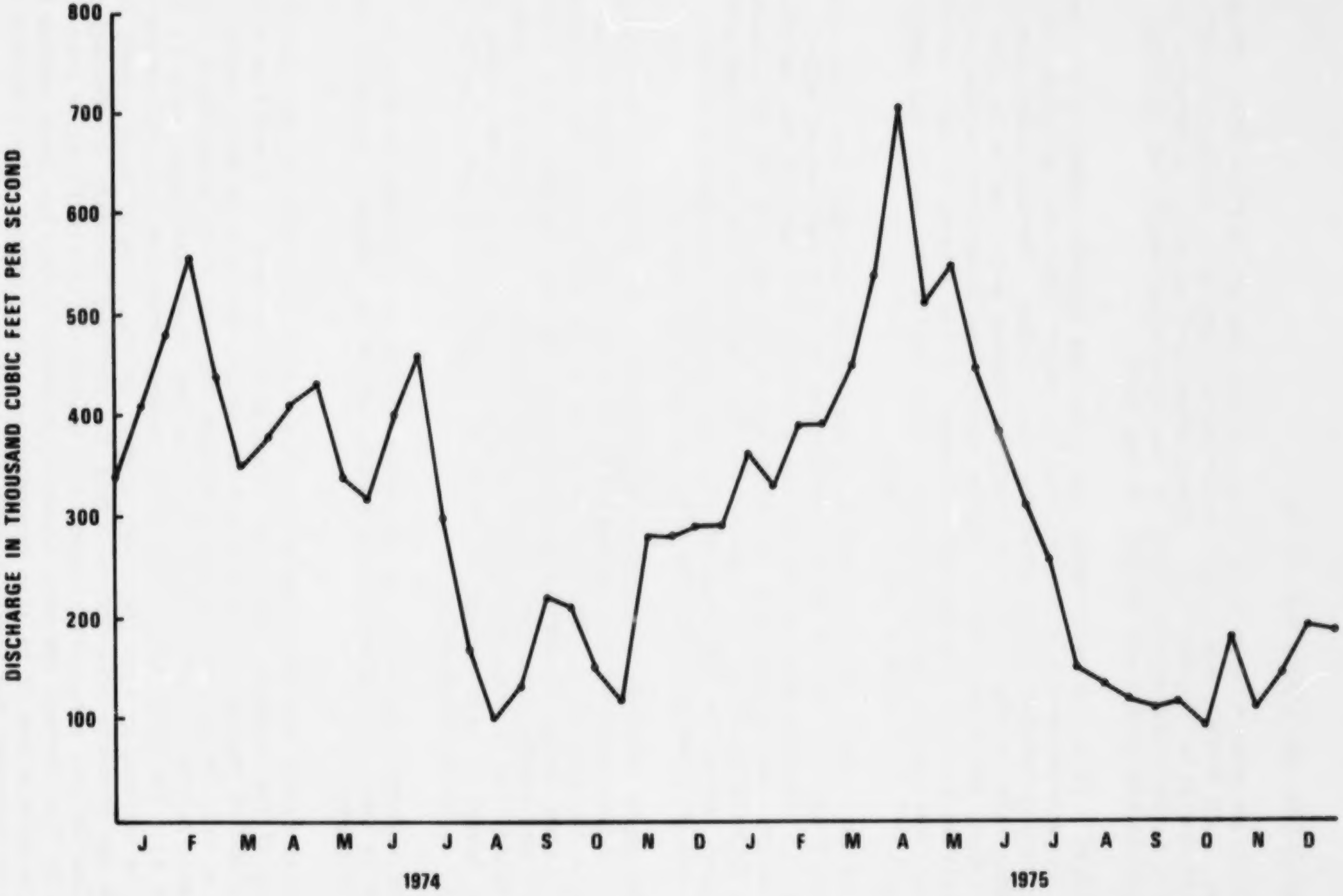


Figure 8. Discharge hydrograph of the Atchafalaya River at Simmesport, Louisiana, 1974-1975.

MATERIALS AND METHODS

SITE SELECTION AND SAMPLE COLLECTION

Stations within seven major areas (inlet, outlet, Buffalo Cove, Fordoche, Pat Bay, Lake Verret, and a fresh-water marsh site) were chosen for phytoplankton analysis (Figures 1-6). These areas were selected to compare various flooding regimes and habitat types in the Atchafalaya Basin and included stations in the inlets and outlets of the Basin.

Table 1 lists the major areas and gives the station numbers within each area, accompanied by a station description, water depth and velocity, and the type of phytoplankton sample taken for each station. Phytoplankton samples were only taken at the surface in fast, well-mixed water, while in slow or still water, the phytoplankton samples represented integrated samples from the compensation point to the surface. However, if the 1 percent light extinction point was not reached because of insufficient depth, the sample was composited from just off the bottom to the surface.

For this study, four stations were sampled to represent the inlet waters (Figures 2 and 3). All of these stations are in fast, well-mixed waters (Table 1). Stations are located in the Old River spillway and the Red River. These waters combine and enter the Atchafalaya Floodway via the main channel of the Atchafalaya River at Simmesport. The combined flow is confined within artificial levees for the first 84 km. Two stations are located in this reach, one at Simmesport and the other at Krotz Springs.

The Bayou Fordoche area covers approximately 220 km^2 of the Atchafalaya Basin Floodway south of U.S. Highway 190 (Figures 3 and 4). Rigid boundaries delineate the area as a hydrologic unit. East and west boundaries are formed by continuous levees of the Atchafalaya River and the Floodway. U.S. Highway 190 and railroad embankments form the northern boundary, while a natural levee ridge bounds the area to the south. A natural river levee extends along the eastern border of this region; it forms the highest ground and is basically occupied by bottom hardwoods.

The northern two-thirds of the western side is a depression which is covered by swamp and bottomland hardwoods, while the southern one-third contains Henderson Lake.

Local runoff and the Atchafalaya River water contribute to the annual flooding of the Fordoche area. The flooding of the area is a modified backwater flooding regime. Atchafalaya River water, during high water months, enters across the southern boundary through the West Atchafalaya Basin Protection Levee barrow pit after diversion from the river into Bayou Butte La Rose (Figure 4). The water then flows north through Henderson Lake and northern swamps in accordance with the river stage. Introduction of local runoff from outside the Fordoche area occurs across the northern boundary and through the Bayou Courtableau structure (Figure 3). Dewatering of the Fordoche area occurs by flow through the West Atchafalaya Basin Protection Levee barrow pit at Butte La Rose and it is also dependent on river stages. Five stations were chosen to represent the Fordoche area (Table 1).

TABLE 1. STATIONS SAMPLED FOR PHYTOPLANKTON ANALYSIS

Area	Station Number	Station Description	Maximum Depth (m)	Velocity*	Sample Type
Inlet	A001000	Old River Control Spillway	39.6	Fast	Surface
	A002000	Red River	21.3	Fast	Surface
	B001000	Atchafalaya River at Simmesport	16.8	Fast	Surface
	B002000	Atchafalaya River at Krotz Springs	18.3	Fast	Surface
Fordoche	E001000	Bayou Courtableau	3.4	Still or slow	Integrated
	E004000	Lake Fordoche	3.7	Still	Integrated
	E008000	Henderson Lake	3.4	Still	Integrated
	E009000	Lake Bigeux	6.1	Still	Integrated
	E011000	Butte La Rose	4.6	Slow or fast	Integrated
Buffalo Cove	E027000	Bayou Gravenburg Northern end	4.3	Still or slow	Integrated
	E028000	Bayou Gravenburg Southern end	1.8	Still or slow	Integrated
	E030000	Buffalo Cove Lake Southeastern end	2.4	Still or slow	Integrated
	E031000	Buffalo Cove Lake Center	2.7	Still or slow	Integrated
	E032000	Buffalo Cove Lake Northern end	3.1	Still or slow	Integrated
East side of Basin	E052000	Unnamed Bayou Northeast of Duck Lake	2.4	Still to slow	Integrated

*Velocity: still - no detectable water movement, slow - less than one meter per minute, fast - greater than one meter per minute.

TABLE 1. STATIONS SAMPLED FOR PHYTOPLANKTON ANALYSIS (Continued)

Area	Station Number	Station Description	Maximum Depth (m)	Velocity*	Sample Type
Outlets:					
Morgan City	E059000	Flat Lake	11.3	Slow to fast	Integrated
	E064000	Stouts Pass	10.7	Fast	Surface
	E065000	Berwick Bay	18.3	Fast	Surface
Wax Lake	E060000	Wax Lake Outlet	18.3	Fast	Surface
	E062000	Six Mile Lake	19.8	Fast	Surface
Marsh below Morgan City	H008000	Bayou Penchant	2.7	Still	Integrated
	H013000	Lake Penchant	1.5	Still	Integrated
Pat Bay	G001000	Pat Bay Northern end	1.8	Still	Integrated
	G002000	Pat Bay Central	1.8	Still	Integrated
	G003000	Pat Bay Southcentral	2.4	Still	Integrated
	G004000	Pat Bay Southern end	2.1	Still	Integrated
Lake Verret**	221601	Lake Verret Northern end	1.8	Still	Integrated
	221602	Lake Verret Northern end	1.8	Still	Integrated
	221603	Lake Verret Central	3.1	Still	Integrated
	221604	Lake Verret Southern end	1.8	Still	Integrated

*Velocity: still - no detectable water movement, slow - less than one meter per minute, fast - greater than one meter per minute.

**The water samples from the four stations in Lake Verret were composited to form one sample for each sampling date.

The Buffalo Cove area, comprising some 230 km², is located 50 km south of the Fordoche area (Figures 1, 4, and 5). The area is bounded by natural levees and spoil-elevated natural levees. The northern one-third has been largely filled in by sediment. The rest of the area is composed of swamps with a few permanent water bodies (e.g., Buffalo Cove Lake, Bayou Gravenburg, Jackass Bay, and arms of Grand Lake).

Annual flooding of Buffalo Cove Basin is normally dependent upon three openings. These are the entrance channel to Buffalo Cove Lake, the Sibon Canal, and Bayou Eugene, and are labeled with arrows and designated 1, 2, and 3 respectively on Figure 5. Dewatering occurs to some extent through Sibon Canal and the entrance channel to Buffalo Cove Lake, but mainly through a channel in the southeastern portion of Buffalo Cove Lake (labeled by arrow Number 4 on Figure 5) which connects to Mud Lake. The connections to Buffalo Cove Lake and Mud Lake always function, while the Sibon Canal and Bayou Eugene flows only function during periods of medium to high river stage.

The overall flooding regime of the Buffalo Cove Basin can be described as flowthrough to semi-backwater flooding, dependent on Basin and river stage. During high water periods, water enters through Bayou Eugene and flowthrough is maintained from north to south in the deep swamps of the western portion of the Buffalo Cove area. During lower stages the flow of Bayou Eugene is eliminated, flowthrough is only maintained south of the Sibon Canal. With further reductions in stage, both Bayou Eugene and Sibon Canal cease to function and the area north of Buffalo Cove Lake is then considered a backwater regime. The source of water to Buffalo Cove Lake is through the entrance channel while the lake is dewatered through the channel to Mud Lake. During extreme low water periods, no flow can be perceived. Five stations were chosen to represent the Buffalo Cove area (Table 1).

Station E052000 lies near Duck Lake in the southeastern portion of the Atchafalaya Basin, northwest of Morgan City, Louisiana (Figure 5). At high river stages a moderate current of muddy water flows southward through Duck Lake and exits at the southeast portion of the lake, eventually draining into Six Mile Lake. The station is not in any of the major study areas but is representative of the southeastern portion of the Basin (Table 1).

Dewatering of the entire Atchafalaya Basin occurs through two major outlets. South of the Buffalo Cove area, the flow diverges into numerous channels, swamps, bayous, and sloughs until it exits the Floodway either at Wax Lake outlet or the lower Atchafalaya River at Morgan City. The water at either outlet is constricted as the river regains its identity. Approximately 30 percent of the flow leaves the Basin proper at the Wax Lake outlet while 70 percent is discharged through the Morgan City outlet. At either outlet the water is fast and well-mixed (Table 1). Two sites are located at the Wax Lake outlet while three sites are located in the outlet waters of the lower Atchafalaya River (Figure 6).

Three areas of study were located outside the Atchafalaya Basin proper for comparison analysis. They are a fresh-water marsh area located south of Morgan City, and Pat Bay and Lake Verret located to the east of the Atchafalaya Basin.

Two stations (H-8, H-13) are located in the fresh-water marsh environment (Figure 1). This area mainly receives water from local runoff from east of the Basin. The two stations representing this area are located in Bayou Penchant and Lake Penchant (Table 1).

Hydrologically, Pat Bay and Lake Verret are part of the Verret Basin contained between the east Atchafalaya Basin Protection Levee and the natural levees of the Mississippi River, Bayou Lafourche and Bayou Black (Figure 1). Both are entirely dependent upon local runoff consisting partially of agricultural drainage.

Lake Verret at an estimated elevation of 0.9 m has a surface area of 57 km^2 and an average depth of 1.5 m (Figure 5). The shoreline development is minimal; only a few camps are located on the south and west shores. However, there are extensive oil and gas fields on the east side of the lake, and several wells in the lake proper.

At an estimated elevation of 1.5 m Pat Bay has a surface area of 1.5 km^2 and an estimated average depth of 1.2 m (Figure 4). Only minimal shoreline development has occurred on Pat Bay. Pat Bay and Lake Verret each contain four sampling locations (Table 1).

STATION CODING

Each sampling station has been assigned a seven-digit alphanumeric STORET number (E032000). STORET (STOrage and RETrieval) is the U.S. EPA computer system which processes and maintains water quality data. The first letter of a STORET number identifies a geographic area of the Basin as follows:

A. North of U.S. Highway 1 and Simmesport, Louisiana.

B. The mainstem of the Atchafalaya River between Simmesport and Krotz Springs, Louisiana.

C. Areas not considered in this report.

D. Areas not considered in this report.

E. The Atchafalaya Floodway, bounded by the East and West Protection Levee and by U.S. Highway 190 on the north and U.S. Highway 90 on the south.

F. Areas not considered in this report.

G. All areas east of the East Protection Levee and north of U.S. Highway 90 and south of U.S. Highway 190.

H. All areas of the Basin south of U.S. Highway 90.

The next three digits designate the primary station number within a given geographic area. The final three digits are used to establish substations of the primary station. Substations are located geographically near already established primary stations. No substation numbers were utilized for this report.

Lake Verret (part of the National Eutrophication Survey) was assigned a four-digit STORET number (2216). The first two digits of the STORET number identify the state of Louisiana; the last two digits identify the lake.

In Figures 1 through 6 abbreviated station numbers were utilized because of space requirements, e.g. A-01 instead of A001000, etc.

SAMPLE PREPARATION

Four milliliters (ml) of Acid-Lugol's solution (Prescott 1970) were added to each 130-ml sample from each site at the time of collection for preservation. The samples were shipped to the Environmental Monitoring and Support Laboratory, Las Vegas, Nevada, where equal volumes from each site were mixed to form two 130-ml composite samples for Lake Verret. One composite sample was put into storage and the other was used for the examination. Samples from the other stations in the Basin were not composited and no backup samples are available.

Prior to examination, the samples were concentrated by the settling method. Solids were allowed to settle for at least 24 hours prior to siphoning off the supernate. The volume of the removed supernate and the volume of the remaining concentrate were measured and concentrations determined. A small (8 ml) library subsample of the concentrate was then taken. The remaining concentrate was gently agitated to resuspend the plankton and poured into a capped, graduated test tube. If a preliminary examination of a sample indicated the need for a more concentrated sample, the contents of the test tube were further concentrated by repeating the settling method. Final concentrations varied from 15 to 40 times the original.

Permanent slides were prepared from concentrated samples after analysis was complete. A drop of superconcentrate from the bottom of the test tube was placed in a ring of clear Karo Corn Syrup with phenol (a few crystals of phenol were added to each 100 ml of syrup) on a glass slide, thoroughly mixed, and topped with a coverglass. After the syrup at the edges of the coverglass had hardened, the excess was scraped away and the mount was sealed with clear fingernail polish. Permanent diatom slides were prepared by drying sample material on a coverglass, heating in a muffle furnace at 400° C for 45 minutes, and mounting in Hyrax. Finally, the mounts were sealed with clear fingernail polish.

Library samples, permanent sample slides and Hyrax-mounted diatom slides are being stored and maintained at the U.S. EPA's Environmental Monitoring and Support Laboratory, Las Vegas.

EXAMINATION

The phytoplankton samples were examined with the aid of binocular compound microscopes. A preliminary examination was performed to precisely identify and list all forms encountered. The length of this examination varied depending on the complexity of the sample. An attempt was made to find and identify all of the forms present in each sample. Often forms were observed which could not be identified to species or to genus. Abbreviated descriptions were used to keep a record of these forms (e.g., lunate cell, blue-green filament, Navicula #1, etc.). Diatom slides were examined using a standard light microscope. If greater resolution was essential to accurately identify the diatoms, a phase-contrast microscope was used.

After the species list was compiled, phytoplankton were enumerated using a Neubauer Counting Chamber with a 40x objective lens and a 10x ocular lens. All forms within each field were counted. The count was continued until a minimum of 100 fields had been viewed, or until the dominant form had been observed a minimum of 100 times.

QUALITY CONTROL

Internal quality control checks on species identifications and counts were performed on a regular basis between project phycologists at the rate of 7 percent. Although an individual had primary responsibility for analyzing a sample, taxonomic problems were discussed among the phycologists.

Additional quality control checks were performed on the Survey samples by Dr. G. W. Prescott of the University of Montana at the rate of 5 percent. Quality control checks were made on 75 percent of these samples to verify species identifications while checks were made on the remaining 25 percent of the samples to verify genus counts. Presently, the agreement between quality control checks for species identifications and genus enumerations is satisfactory.

WATER QUALITY INDICES

The following biologically based water quality indices were routinely calculated for each sample with the aid of a computer. Although most are well known and widely used, the results should be interpreted carefully because the indices were applied to each sample without regard to season, geographical area or nature of pollutant impact.

Nygaard's Trophic State Indices

Five indices devised by Nygaard (1949) were proposed under the assumption that certain algal groups are indicative of levels of nutrient enrichment. These indices were calculated in order to aid in determining the surveyed station or lakes' trophic status. As a general rule, Cyanophyta, Euglenophyta, centric diatoms, and members of the Chlorococcales are found in waters that are eutrophic (rich in nutrients), while desmids and many pennate diatoms generally cannot tolerate high nutrient levels and so are found in oligotrophic waters (poor in nutrients).

TABLE 2. NYGAARD'S TROPHIC STATE INDICES ADAPTED FROM HUTCHINSON (1967)

Index	Calculation	Oligotophic	Eutrophic
Myxophycean	$\frac{\text{Myxophyceae}}{\text{Desmideae}}$	0.0-0.4	0.1-3.0
Chlorophycean	$\frac{\text{Chlorococcales}}{\text{Desmideae}}$	0.0-0.7	0.2-9.0
Diatom	$\frac{\text{Centric Diatoms}}{\text{Pennate Diatoms}}$	0.0-0.3	0.0-1.75
Euglenophyte	$\frac{\text{Euglenophyta}}{\text{Myxophyceae + Chlorococcales}}$	0.0-0.2	0.0-1.0
Compound	$\frac{\text{Myxophyceae + Chlorococcales + Centric Diatoms + Euglenophyta}}{\text{Desmideae}}$	0.0-1.0	1.2-25

TABLE 3. ALGAL GENUS POLLUTION INDEX (Palmer 1969)

Genus	Pollution Index
Anacystis	1
Anksitrodesmus	2
Chlamydomonas	4
Chlorella	3
Closterium	1
Cyclotella	1
Euglena	5
Comphonema	1
Lepocinclis	1
Melosira	1
Micractinium	1
Navicula	3
Nitzschia	3
Oscillatoria	5
Pandorina	1
Phacus	2
Phormidium	1
Scenedesmus	4
Stigeoclonium	2
Synedra	2

TABLE 4. ALGAL SPECIES POLLUTION INDEX (Palmer 1969)

Species	Pollution Index
Ankistrodesmus falcatus	3
Arthrospira jenneri	2
Chlorella vulgaris	2
Chyclotella meneghiniana	2
Euglena gracilis	1
Euglena viridis	6
Gomphonema parvulum	1
Melosira varians	2
Navicula cryptocephala	1
Nitzchia acicularis	1
Nitzchia palea	5
Oscillatoria chlorina	2
Oscillatoria limosa	4
Oscillatoria princeps	1
Oscillatoria putrida	1
Oscillatoria tenuis	4
Pandorina morum	3
Scenedesmus quadricauda	4
Stigeoclonium tenue	3
Synedra ulna	3

In applying the indices to the Survey data, the number of taxa in each major group was determined from the species list for each sample. The ratios of these groups give numerical values which can be used as a biological index of water richness. The five indices and the ranges of values established for Danish lakes by Nygaard for each trophic state are presented in Table 2. The appropriate symbol, (E) eutrophic and (O) oligotrophic, follows each calculated value. A question mark (?) was entered when the calculated value was within the range of both classifications.

Palmer's Organic Pollution Indices

Palmer (1969) analyzed reports from 165 authors and developed algal pollution indices for use in rating water samples with high organic pollution. Two lists of organic pollution-tolerant forms were prepared, one containing 20 genera, the other, 20 species (Tables 3 and 4). Each form was assigned a pollution index number ranging from 1 for moderately tolerant forms to 6 for extremely tolerant forms. Palmer based the index numbers on occurrence records and/or where emphasized by the authors as being especially tolerant of organic pollution.

In analyzing a water sample, any of the 20 genera or species of algae present in concentrations of 50 per ml or more are recorded. The pollution index numbers of the algae present are totaled, providing a genus score and a species score. Palmer determined that a score of 20 or more for either index can be taken as evidence of high organic pollution, while a score of 15 to 9 is taken as probable evidence of high organic pollution. Lower figures suggest that the organic pollution of the sample is not high, that the sample is not representative, or that some substance or factor interfering with algal persistence is present and active.

Species Diversity and Abundance Indices

"Information content" of biological samples is being used commonly by biologists as a measure of diversity. Diversity in this connection means the degree of uncertainty attached to the specific identity of any randomly selected individual. The greater the number of taxa and the more equal their proportions, the greater the uncertainty, and hence, the diversity (Pielou 1966). There are several methods of measuring diversity, e.g., the formulas given by Brillouin (1962) and Shannon and Weaver (1963). The method which is appropriate depends on the type of biological sample on hand.

Pielou (1966) classifies the types of biological samples and gives the measure of diversity appropriate for each type. Our phytoplankton samples are what she classifies as larger samples (collections in Pielou's terminology) from which random subsamples can be drawn. According to Pielou (1966), the average diversity per individual for these types of samples can be estimated from the Shannon-Wiener formula (Shannon and Weaver 1963):

$$H = -\sum_{i=1}^{S} P_i \log_x P_i,$$

where P is the proportion of the ith taxon in the sample, which is calculated from n_i/N; n_i is the number of individuals per ml of the ith taxon, N is the total number of individuals per ml, and S is the total number of taxa. However, Basharin (1959) and Pielou (1966) have pointed out that H calculated from the subsample is a biased estimator of the sample H, and if this bias is to be accounted for, we must know the total number of taxa present in the sample since the magnitude of this bias depends on it. Pielou (1966) suggests that if the number of taxa in the subsample falls only slightly short of the number in the larger sample, no appreciable error will result in considering S, estimated from the subsample, as being equal to the sample value. Even though considerable effort was made to find and identify all taxa, the samples undoubtedly contain a fair number of rare phytoplankton taxa which were not encountered.

In the Shannon-Wiener formula, an increase in the number of taxa and/or an increase in the evenness of the distribution of individuals among taxa will increase the average diversity per individual from its minimal value of zero. Sager and Hasler (1969) found that the richness of taxa was of minor importance in determination of average diversity per individual for phytoplankton and they concluded that phytoplankton taxa in excess of the 10 to 15 most abundant ones have little effect on H, which was verified by our own calculations. Our counts are in number per ml and since logarithms to the base 2 were used in our calculations, H is expressed in units of bits per individual. When individuals of a taxon were so rare that they were not counted, a value of 1/130 per ml or 0.008 per ml was used in the calculations since at least one individual of the taxon must have been present in the collection.

The Lake Verrette (National Eutrophication Survey) samples represent a composite of all phytoplankton collected at the four different sampling stations on the lake; however, samples from the other stations were not composited. The number of samples, M, making up a composite is given in the appendix. The maximum diversity, MaxH, (i.e., when the individuals are distributed among the taxa as evenly as possible) was estimated from $\log_2 S$; the total diversity, D, was calculated from HN, and the evenness component of diversity, J, was estimated from H/MaxH (Pielou 1966). Also given in the appendix are L, the mean number of individuals per taxa per ml, and K, the number of individuals per ml of the most abundant taxon in the sample.

Zand (1976) suggests that diversity indices be expressed in units of "sits", i.e., in logarithms to base S (where S is the total number of taxa in the sample) instead of in "bits," i.e., in logarithms to base 2. Zand points out that the diversity index in sits per individual is a normalized number ranging from 1 for the most evenly distributed samples, to 0 for the least evenly distributed samples. Also, it can compare different samples, independent of the number of taxa in each. The diversity in bits per individual should not be used in direct comparisons involving various samples which have different numbers of species. Since MaxH equals log S, the expression in sits is equal to $\log_S S$, or 1. Therefore diversity in sits per individual is numerically equivalent to J, the evenness component of the Shannon-Weaver diversity relationship.

RESULTS

The Appendix summarizes all of the phytoplankton data collected from the Basin. It is organized by station except for Lake Verret which is included at the end of the Appendix. An alphabetic phytoplankton species list for each station and Lake Verret gives the concentrations of individual species by sampling date. Where a station was sampled on more than 3 dates the data summary continues on a second species list identical to the first. Concentrations are in cells, colonies, or filaments (CEL, COL, FIL) per ml. An "X" after a species name indicates the presence of the species on that date in such a low concentration that it did not show up in the count. A blank space indicates that the organism was not found in the sample collected on that date. Column S is used to designate the examiner's subjective opinion of the five dominant taxa in a sample, based upon relative size and concentration of the organism. The percent composition (%C) of each taxon, by abundance, is also presented. Each species list is preceded with a summary table of the various water quality indices (Nygaard Trophic State Indices, Palmer's Organic Pollution Indices, and species diversity and abundance indices).

DISCUSSION

GENERAL FINDINGS

In this study 107 genera and 287 species of algae were identified in 86 samples. It is appropriate to compare these results to Bryan et al. (1975), who studied the phytoplankton of the Atchafalaya Basin.

The two generic lists were comparable with 51 genera in common. There were, however, numerous genera unique to each study, e.g., 21 in Bryan's and 56 in ours. These genera were usually rare, occurring in less than 20 percent of the samples. However, there were several interesting exceptions. Asterionella, Skeletonema, Dactylococcopsis, Chroomonas, and Cryptomonas were missing from Bryan's list but were common in occurrence and/or dominant occurrence in our list (dominance was defined as the occurrence of a genus or species which was greater than or equal to 10 percent of the total numerical concentration of a sample).

Bryan et al. (1975) reported the presence of Hyalotheca in approximately 50 percent of the samples they examined, while the genus was totally absent from our samples. Some species of Hyalotheca can be confused with forms of Melosira distans which were common in our samples.

COMPARISON OF MAJOR AREAS

The phytoplankton data were summarized by area and are presented in Table 5. The values given are means, for each category, of all station-date combinations within each area. The table provides area trends for major algal groupings, e.g., diatoms, flagellates, Cyanophyta, Chlorococcales, and others. Similar summaries are given for several indices including total cell concentrations, Shannon-Wiener diversity index (H), evenness component of diversity (J), Palmer's Organic Pollution Index for genus, Nygaard's Compound Index for trophic state, and the mean number of taxa found at each station-date combination. This table provides a format for direct comparison of area trends and illustrates major differences between areas.

Diatoms represented the largest component of the major groupings in the Basin proper, which is in agreement with Bryan et al. (1975). The major groupings listed in decreasing order are: diatoms (49%), flagellates (26%), Cyanophyta (13%), Chlorococcales (8%) and others (3%). Outside the Basin proper, blue-greens and flagellates formed the largest components. The composition was: Cyanophyta (34%), flagellates (28%), diatoms (26%), Chlorococcales (10%), and others (2%).

Average total cell concentrations varied significantly between the two areas as well. The Basin had lower concentrations, 1,200 algal units/ml, while the outside average was 42,000 algal units/ml.

TABLE 5. DATA SUMMARY BY MAJOR AREAS

Area	Station Data		% Composition*					Indices*					
	# of Stations	# of station-date comb.	Diatoms	Flagellates	Cyanophyta	Chlorococcales	Others	Cell Count	# of Taxa	Palmer's Genus Index	Nygaard's Cmpd. Index	H	J
Basin Proper:													
Inlet	4	14	76	13	4	4	3	780**	19	2.2	11	1.90	0.45
Outlet	5	12	48	29	14	8	1	1,000	23	7.2	11	2.78	0.63
Fordoche	5	19	30	40	12	8	10	1,500	22	5.7	14	2.58	0.60
Buffalo Cove	5	15	51	24	10	14	1	1,800	23	5.7	14	2.69	0.59
East-Side	1	3	40	25	27	8	-	750	25	4.3	12	2.24	0.48
Outside:													
Lake Verret	1	3	18	9	62	11	-	90,000	44	21.0	32	2.43	0.48
Pat Bay	4	12	28	56	4	9	3	8,000	34	9.1	20	2.50	0.49
Penchant	2	8	31	20	36	10	3	28,000	48	16.0	18	3.21	0.60
Basin Proper	20	63	49	26	13	8	3	1,200	22	5.0	12	2.44	0.55
Outside	7	23	26	28	34	10	2	42,000	42	15.4	23	2.71	0.52

*Values are means of all station-date combinations within each area.

**The cell count from station A00200 on December 18, 1975 was deleted from the computation due to its extremely high value.

These data, composition and concentration, were indicative of higher primary productivity outside the Atchafalaya Basin than within. This conclusion was further supported by the indices addressed in Table 5, especially Palmer's, Nygaard's, and the number of taxa, where values outside the Basin were two or more times those of the Basin proper.

The evenness component of diversity (J) and the diversity index (H) demonstrated a similar trend in diversity among the major study areas of the Basin (Table 5). Evenness component analyses divided the areas into three groups: inlet (J = 0.45), East Side, Lake Verret, and Pat Bay (J = 0.48-0.49), and the Fordoche, Buffalo Cove, Penchant, and outlet (J = 0.59-0.63). Diversity (H) formed the same groupings but the separation between the second and third was not as obvious. Both indices showed the inlet waters to be the least diverse.

The following comparisons and analyses of specific areas within and outside the Basin proper describe and illustrate the complexity of the Atchafalaya system. The inlet stations were the least productive areas examined, as reflected by low mean total concentrations (780 algal units/ml), as well as the lowest mean diversity (H = 1.90). These values reflected the high sediment load of the inlet waters which had been confined within well-defined channels over long distances. The inlet waters also had the lowest average number of Palmer's genus indicator units and for Nygaard's compound trophic state index, and the lowest mean number of taxa per station-date.

Diatoms dominated the flora of the inlet waters, averaging 76 percent of the numerical totals. Flagellates constituted the only subdominant group of any significance although they were the dominating group in two samples, both collected during highwater in April. The overwhelming diatom dominance was associated with relatively low total cell concentrations and algal productivity.

The one exception to the general trend of inlet waters was a bloom of *Cyclotella meneghiniana* recorded at station A002000 in the Red River on December 18, 1975. *C. meneghiniana* accounted for 95 percent of the total population and was at a concentration of 35,000 cells/ml.

It is interesting to compare and contrast conditions at the Basin inlet to those of the outlet stations. The algal community of the outlet resembles the inlet more than any other habitat type studied. Most of the water reaching the outlet passes straight through the system with some additions from water moving through swamp areas. The quantity of suspended material at the outlet is similar to that in the inlet.

The mean cell concentration at the outlet was only slightly higher than that of the inlet, although the diversity increased considerably (2.78 vs. 1.90). The other indices were higher at the outlet also, especially Palmer's, with more than three times the number of indicator units than occurred at the inlet.

Although outlet waters were also dominated by diatoms, the degree of dominance was less. Flagellates and blue-green algae increased significantly in relative abundance, 25 percent and 12 percent respectively. The increased diversity of the outlet stations was most likely due to direct input of floral components from the diverse habitats of the entire Basin as the waters recombine before leaving the Basin.

The Fordoche, Buffalo Cove and east-side stations are representative swamp areas within the Basin proper. They have complex and variable water movement patterns but have relatively slow-moving or still water. Consequently, sediment load is reduced compared to mainstem waters, improving light conditions for algal growth.

Indeed, all our indicators of productivity are higher in these areas than in the inlet waters. Phytoplankton concentrations in Fordoche and Buffalo Cove are double that of the inlet value. Evenness component of diversity, Palmer's genus indicators, Nygaard's compound index, and the number of taxa are essentially identical for the two habitats but always at values greater than those of the inlet. Each of the four major algal groups was more equally represented in Fordoche and Buffalo Cove samples than in the inlet samples. However, diatoms were more important in Buffalo Cove than they were in Fordoche.

The east-side station exhibited the same trend but to a lesser degree. It had the lowest mean cell concentration of all habitats. Only three samples were examined from the east-side station and it is not certain that an accurate trend for the area was established.

The remaining three areas, Pat Bay, Lake Verret, and Penchant are located outside the Basin proper. Water supplying these areas originates locally and is not influenced by water passing through the Basin proper. As a consequence the waters are slow-moving and carry less sediment load than waters in other study areas. Therefore, phytoplankton production is not as light-limited due to silts and large algal populations develop.

Pat Bay, averaging 9,000 organisms per milliliter, was the least productive of the three areas, followed by Penchant (28,000/ml) and Lake Verret (90,000/ml). The diversities of Lake Verret and Pat Bay were similar while Penchant proved to be the most diverse of all habitats. The other indices are quite high compared to all habitat values within the Basin proper. The highest value for the Palmer index within the Basin proper was 7.2, while outside, values of 9.1, 16, and 21 were calculated. Likewise, within the Basin proper, the highest Nygaard compound value was 14 while outside values were 18, 21, and 32. The mean number of taxa per station-date followed the same trend e.g., 25 taxa was the highest value within the Basin proper while outside values were 34, 44, and 48.

The greatest differences noted within the three areas were in algal composition. Lake Verret was dominated by blue-green algae, especially filamentous types (Oscillatoria and Lyngbya). Diatoms were second in importance while flagellates and Chlorococcales contributed only about 10 percent each to the flora. Pat Bay, on the other hand, had few blue-green algae but rather was dominated by flagellates, with diatoms forming a strong subdominant group. Penchant had the most evenly distributed composition with diatoms, blue-greens, and flagellates sharing the dominant positions.

PHYTOPLANKTON ABUNDANCE AND OCCURRENCE

A summary of the phytoplankton species and occurrence by major groups is provided in Table 6. The table was compiled from data given in Table 7 and in the Appendix. Table 7 is a computer generated alphabetic species list of the phytoplankton identified in this study. The species list does not include non-specific types as found in the Appendix.

Table 6 gives the number of species, the total number of occurrences and the number of dominant occurrences by major group e.g., Cyanophyta, Pyrrophyta, Euglenophyta, etc. The table considers all samples collected for this study irrespective of geographic location.

Chlorococcales and diatoms had the greatest numbers of species, 85 and 82 respectively. Euglenophyta was third with 47 species and Cyanophyta fourth with 27 species. These four groups accounted for 84 percent of all species identifed. The overriding importance of the diatoms is illustrated by examining dominant species occurrence; of the 450 occurrences of diatoms, 119 reached dominance.

The diatoms can be subdivided into two groups, pennate diatom species (64) and centric diatom species (18). Although there are more than 3½ times as many species of pennate diatoms as centrics, the pennates accounted for only 36 percent of the total diatom occurrences. The importance of the relatively few species of centric diatoms is further illustrated by the fact that they were represented as dominants 93 times.

TABLE 6. SUMMARY OF THE NUMBER OF SPECIES, OCCURRENCES AND DOMINANT OCCURRENCES WITHIN MAJOR GROUPINGS

	Number of Species	Total Number of Occurrences	Number of Dominant Occurrences
Cyanophyta	27	112	23
Pyrrophyta	10	39	0
Euglenophyta	47	139	9
Chlorococcales	85	379	20
Pennate Diatoms	64	163	26
Centric Diatoms	18	287	93
Green Flagellates	13	44	6
Chrysophytan Flagellates	10	14	4
Cryptophyceace	6	75	45
Others	7	10	0

TABLE 7. PHYTOPLANKTON SPECIES OCCURRENCE AND ABUNDANCE

Species	$\bar{x}$*	n**	%***
Achnanthes lanceolata v. *dubia*	0	1	1.2
Achnanthes microcephala	233	1	1.2
Actinastrum hantzschii	34	1	1.2
Actinastrum hantzschii v. *fluviatile*	2	14	16.3
Anabaena planctonica	24	2	2.3
Anabaenopsis circularis	590	4	4.7
Anabaenopsis elenkinii	266	1	1.2
Anabaenopsis philippinensis	2929	1	1.2
Anabaenopsis raciborskii	1574	3	3.5
Ankistrodesmus convolutus ?	0	1	1.2
Ankistrodesmus falcatus	480	21	24.4
Ankistrodesmus falcatus v. *mirabilis*	337	26	30.2
Aphanizomenon flos-aquae	206	9	10.5
Aphanizomenon gracile ?	570	1	1.2
Aphanocapsa delicatissima ?	0	1	1.2
Aphanocapsa elachista	0	1	1.2
Aphanothece nidulans	0	1	1.2
Asterionella formosa	15	34	39.5
Asterionella formosa v. *gracillima*	0	2	2.3
Campylodiscus echeneis	0	1	1.2
Carteria cordiformis	163	2	2.3
Ceratium hirundinella f. *brachyceras*	0	2	2.3
Ceratium hirundinella f. *furcoides*	0	1	1.2
Chaetoceros elmorei	0	1	1.2
Chilomonas paramaecium	215	2	2.3
Chlamydomonas cienkowskii	651	1	1.2
Chlamydomonas globosa	77	7	8.1
Chlorogonium elongatum	0	2	2.3
Chlorogonium minimum	0	1	1.2
Chroomonas acuta	312	1	1.2
Chroomonas nordstedtii	522	3	3.5
Chrysococcus ? rufescens	0	1	1.2
Closterium kutzingii	0	1	1.2
Cocconeis placentula	63	10	11.6
Cocconeis placentula v. *euglypta*	0	2	2.3

* $\bar{x}$ = Mean algal units per ml

** n = Number of occurrences (e.g., Achnanthes microcephala occurred in 1 sample)

*** % = Percent occurrence (e.g., Achnanthes microcephala occurred in 1.2 percent of the samples analyzed)

TABLE 7. PHYTOPLANKTON SPECIES OCCURRENCE AND ABUNDANCE (Continued)

Species	$\bar{x}$*	n**	%***
Cocconeis placentula v. *lineata*	0	1	1.2
Coelastrum cambricum	0	1	1.2
Coelastrum cambricum v. *intermedium*	183	3	3.5
Coelastrum microporum	20	8	9.3
Coelastrum sphaericum	37	4	4.7
Coscinodiscus denarius	0	1	1.2
Coscinodiscus lacustris	44	4	4.7
Coscinodiscus rothii v. *subsalsa*	20	15	17.4
Crucigenia apiculata	22	2	2.3
Crucigenia crucifera	0	1	1.2
Crucigenia fenestrata	77	8	9.3
Crucigenia quadrata	56	4	4.7
Crucigenia rectangularis	0	1	1.2
Crucigenia tetrapedia	68	14	16.3
Cryptomonas erosa	234	31	36.0
Cryptomonas marssonii	275	22	25.6
Cryptomonas reflexa	13	16	18.6
Cyclotella bodanica ?	0	1	1.2
Cyclotella glomerata	244	1	1.2
Cyclotella menenghiniana	1289	32	37.2
Cyclotella michiganiana	0	1	1.2
Cymatopleura solea	30	1	1.2
Cymbella turgida	0	1	1.2
Cymbella ventricosa	55	1	1.2
Dactylococcopsis irregularis	1929	10	11.6
Diatoma vulgare	8	4	4.7
Dictyosphaerium ehrenbergianum	27	3	3.5
Dictyosphaerium pulchellum	188	4	4.7
Dinobryon bavaricum	0	1	1.2
Dinobryon cylindricum	0	1	1.2
Dinobryon divergens	0	2	2.3
Dinobryon sertularia	34	1	1.2
Diploneis interrupta ?	0	1	1.2
Diploneis puella	84	1	1.2
Diploneis smithii	0	1	1.2

* $\bar{x}$ = Mean algal units per ml
** n = Number of occurrences
*** % = Percent occurrence

TABLE 7. PHYTOPLANKTON SPECIES OCCURRENCE AND ABUNDANCE (Continued)

Species	x̄*	n**	%***
Elakatothrix gelatinosa	29	6	7.0
Epithemia turgida	0	1	1.2
Euastrum denticulatum	0	2	2.3
Eudorina elegans	0	1	1.2
Euglena acus ?	0	1	1.2
Euglena gracilis	6	7	8.1
Euglena oxyuris	0	6	7.0
Euglena oxyuris v. *minor*	0	1	1.2
Euglena subehrenbergii ?	0	1	1.2
Euglena tripteris	0	8	9.3
Eunotia curvata	0	5	5.8
Eunotia pectinalis v. *minor*	0	1	1.2
Fragilaria construens	0	1	1.2
Fragilaria construens v. *subsalina*	0	1	1.2
Fragilaria crotonensis	10	5	5.8
Franceia droescheri	0	1	1.2
Franceia ovalis	0	1	1.2
Frustulia rhomboides	0	1	1.2
Glenodinium gymnodinium	0	1	1.2
Glenodinium gymnodinium v. *biscutelliforme*	0	1	1.2
Glenodinium oculatum	14	11	12.8
Gloeocystis planctonica	28	1	1.2
Golenkinia radiata	109	2	2.3
Gomphonema acuminatum v. *trigonocephala*	15	1	1.2
Gomphonema angustatum	0	1	1.2
Gomphonema angustatum v. *producta*	0	2	2.3
Gomphonema constrictum	0	1	1.2
Gomphonema olivaceum	3	5	5.8
Gomphonema parvulum	9	3	3.5
Gonium pectorale	0	1	1.2
Gymnodinium albulum	47	10	11.6
Gymnodinium ordinatum	73	5	5.8
Gyrosigma kutzingii	0	1	1.2
Gyrosigma macrum	0	1	1.2
Gyrosigma scalproides	0	4	4.7

* x̄ = Mean algal units per ml
** n = Number of occurrences
*** % = Percent occurrence

TABLE 7. PHYTOPLANKTON SPECIES OCCURRENCE AND ABUNDANCE (Continued)

Species	x̄*	n**	%***
Hantzschia amphioxys	0	2	2.3
Kirchneriella lunaris	0	1	1.2
Lagerheimia subsalsa	28	1	1.2
Lepocinclis acuta	0	2	2.3
Lepocinclis fusiformis	0	1	1.2
Lepocinclis glabra f. *minor*	150	1	1.2
Lyngbya circularis	0	1	1.2
Lyngbya lagerheimii	5300	2	2.3
Lyngbya limnetica	5956	4	4.7
Mallomonas akrokomos ?	51	1	1.2
Mallomonas alpina	0	1	1.2
Mallomonas caudata	0	1	1.2
Mastogloia braunii	0	1	1.2
Melosira distans	229	69	80.2
Melosira granulata	272	38	44.2
Melosira granulata v. *angustissima*	89	23	26.7
Melosira granulata v. *angustissima* f. *spiralis*	51	8	9.3
Melosira islandica	198	1	1.2
Melosira italica	113	4	4.7
Melosira varians	40	19	22.1
Merismopedia glauca	277	1	1.2
Merismopedia minima	179	2	2.3
Merismopedia punctata	219	2	2.3
Merismopedia tenuissima	357	21	24.4
Mesostigma viridis	29	7	8.1
Micractinium pusillum	36	1	1.2
Microcystis aeruginosa	0	2	2.3
Microcystis incerta	236	13	15.1
Navicula cascadensis	0	1	1.2
Navicula cincta	0	1	1.2
Navicula cuspidata ?	0	1	1.2
Navicula exigua	0	1	1.2
Navicula gastrum	42	1	1.2
Navicula radiosa	0	1	1.2
Navicula vulpina	0	1	1.2

* x̄ = Mean algal units per ml
** n = Number of occurrences
*** % = Percent occurrence

TABLE 7. PHYTOPLANKTON SPECIES OCCURRENCE AND ABUNDANCE (Continued)

Species	$\bar{x}$*	n**	%***
Navicula zanoni	0	1	1.2
Neidium iridis	0	1	1.2
Nitzschia acicularis	87	9	10.5
Nitzschia actinastroides	105	1	1.2
Nitzschia angustata	0	1	1.2
Nitzschia filiformis	11	5	5.8
Nitzschia hantzschiana	0	1	1.2
Nitzschia holsatica	9	3	3.5
Nitzschia lorenziana ?	43	2	2.3
Nitzschia palea	34	3	3.5
Nitzschia paradoxa	0	1	1.2
Nitzschia reversa ?	272	1	1.2
Nitzschia sigmoidea	0	1	1.2
Nitzschia tryblionella	0	1	1.2
Nitzschia tryblionella v. *levidensis*	0	1	1.2
Oocystis borgei	0	1	1.2
Oocystis citriformis	0	1	1.2
Oocystis pusilla	0	2	2.3
Ophiocytium capitatum v. *longispinum*	107	3	3.5
Oscillatoria amphibia	0	1	1.2
Oscillatoria angusta	0	1	1.2
Oscillatoria geminata ?	68499	1	1.2
Oscillatoria limnetica	68	21	24.4
Oscillatoria splendida	0	2	2.3
Oscillatoria subbrevis	0	1	1.2
Pandorina morum	7	4	4.7
Pediastrum biradiatum	0	3	3.5
Pediastrum biradiatum v. *longecornutum*	0	1	1.2
Pediastrum boryanum	0	3	3.5
Pediastrum duplex	0	7	8.1
Pediastrum duplex v. *clathratum*	40	3	3.5
Pediastrum duplex v. *reticulatum*	36	4	4.7
Pediastrum simplex	6	5	5.8
Pediastrum simplex v. *duodenarium*	0	3	3.5
Pediastrum tetras	7	4	4.7

* $\bar{x}$ = Mean algal units per ml
** n = Number of occurrences
*** % = Percent occurrence

TABLE 7. PHYTOPLANKTON SPECIES OCCURRENCE AND ABUNDANCE (Continued)

Species	$\bar{x}$*	n**	%***
Pediastrum tetras v. *tetraodon*	59	7	8.1
Peridinium pusillum	73	1	1.2
Peridinium quadridens	70	2	2.3
Peridinium umbonatum	26	5	5.8
Phacus acuminatus	5	3	3.5
Phacus anomalus	0	2	2.3
Phacus caudatus	0	2	2.3
Phacus curvicauda	0	6	7.0
Phacus glaber	0	3	3.5
Phacus helikoides	0	4	4.7
Phacus longicauda	8	6	7.0
Phacus megalopsis	0	7	8.1
Phacus nordstedtii	33	1	1.2
Phacus orbicularis	0	2	2.3
Phacus pleuronectes	0	1	1.2
Phacus pseudonordstedtii	0	2	2.3
Phacus pyrum	0	3	3.5
Phacus suecicus	0	2	2.3
Phacus tortus	8	4	4.7
Phacus trimarginatus	0	1	1.2
Pinnularia gentilis	0	1	1.2
Pinnularia gibba	0	1	1.2
Pleurosigma delicatulum	0	1	1.2
Pteromonas angulosa	25	14	16.3
Pteromonas cruciata	0	2	2.3
Raphidiopsis curvata	3948	3	3.5
Rhopalodia gibba	0	2	2.3
Scenedesmus abundans	235	9	10.5
Scenedesmus acuminatus	78	4	4.7
Scenedesmus acutus	0	2	2.3
Scenedesmus anomalus	0	1	1.2
Scenedesmus anomalus v. *acaudatus*	0	1	1.2
Scenedesmus apiculatus	0	1	1.2
Scenedesmus arcuatus	59	2	2.3
Scenedesmus armatus	143	1	1.2

* $\bar{x}$ = Mean algal units per ml
** n = Number of occurrences
*** % = Percent occurrence

TABLE 7. PHYTOPLANKTON SPECIES OCCURRENCE AND ABUNDANCE (Continued)

Species	$\bar{x}$*	n**	%***
Scenedesmus armatus v. *bicaudatus*	0	1	1.2
Scenedesmus armatus v. *boglariensis* v. *bicaudatus*	0	1	1.2
Scenedesmus bicaudatus	18	12	14.0
Scenedesmus bijuga	68	12	14.0
Scenedesmus bijuga f. *irregularis*	0	1	1.2
Scenedesmus bijuga v. *flexuosus*	0	1	1.2
Scenedesmus brasiliensis	83	1	1.2
Scenedesmus denticulatus	29	4	4.7
Scenedesmus denticulatus v. *linearis*	0	1	1.2
Scenedesmus dimorphus	69	42	48.8
Scenedesmus ecornis v. *disciformis*	51	2	2.3
Scenedesmus intermedius	40	3	3.5
Scenedesmus intermedius v. *bicaudatus*	57	8	9.3
Scenedesmus obliquus	0	1	1.2
Scenedesmus opoliensis	233	3	3.5
Scenedesmus ovalternus	0	1	1.2
Scenedesmus protuberans	118	10	11.6
Scenedesmus quadricauda	161	34	39.5
Scenedesmus raciborskii f. *granulatus*	39	1	1.2
Schizochlamys delicatula ?	0	1	1.2
Schroederia setigera	71	12	14.0
Skeletonema potamos	168	47	54.7
Spermatozoopsis exultans	307	1	1.2
Sphaerocystis ? schroeteri	0	1	1.2
Staurastrum cuspidatum ?	28	1	1.2
Staurastrum tetracerum	143	1	1.2
Stephanodiscus astraea	67	15	17.4
Stephanodiscus niagarae	77	7	8.1
Surirella linearis	0	2	2.3
Surirella ovata	0	1	1.2
Synedra acus	18	3	3.5
Synedra gaillonii	0	1	1.2
Synedra ulna	11	14	16.3
Synedra ulna v. *oxyphynchus*	0	2	2.3
Synedra ulna vars.	0	1	1.2

* $\bar{x}$ = Mean algal units per ml
** n = Number of occurrences
*** % = Percent occurrence

TABLE 7. PHYTOPLANKTON SPECIES OCCURRENCE AND ABUNDANCE (Continued)

Species	x̄*	n**	%***
Synura uvella	319	5	5.8
Tabellaria fenestrata	0	2	2.3
Tetraedron caudatum	26	2	2.3
Tetraedron caudatum v. *longispinum*	72	2	2.3
Tetraedron gracile	0	2	2.3
Tetraedron minimum	26	10	11.6
Tetraedron minimum v. *scrobiculatum*	499	4	4.7
Tetraedron muticum	111	5	5.8
Tetraedron muticum f. *punctulatum*	0	1	1.2
Tetraedron pentaedricum	0	1	1.2
Tetraedron regulare	84	3	3.5
Tetraedron regulare v. *granulata*	15	2	2.3
Tetraedron regulare v. *incus*	32	4	4.7
Tetraedron trigonum	4	1	1.2
Tetraedron trigonum v. *gracile*	0	3	3.5
Tetraedron tumidulum	16	2	2.3
Tetrastrum elegans	31	6	7.0
Tetrastrum glabrum	71	4	4.7
Tetrastrum heteracanthum	37	4	4.7
Tetrastrum staurogeniaeforme	74	20	23.3
Thorakomonas ? fedlmanii	0	1	1.2
Trachelomonas abrupta	61	1	1.2
Trachelomonas caudata ?	0	1	1.2
Trachelomonas crebea	0	2	2.3
Trachelomonas cylindrica	285	1	1.2
Trachelomonas fluviatilis	0	2	2.3
Trachelomonas gibberosa	24	1	1.2
Trachelomonas hispida	20	5	5.8
Trachelomonas hispida v. *punctata*	26	2	2.3
Trachelomonas intermedia	35	18	20.9
Trachelomonas lacustris	0	2	2.3
Trachelomonas longicauda	0	1	1.2
Trachelomonas oblonga	0	1	1.2
Trachelomonas planctonica	0	2	2.3
Trachelomonas playfairii	0	1	1.2
Trachelomonas pulcherrima	0	1	1.2

* x̄ = Mean algal units per ml
** n = Number of occurrences
*** % = Percent occurrence

TABLE 7. PHYTOPLANKTON SPECIES OCCURRENCE AND ABUNDANCE (Continued)

Species	$\bar{x}$*	n**	%***
Trachelomonas rotundata	0	1	1.2
Trachelomonas schauinslandii	2	2	2.3
Trachelomonas sparse-setulosa ?	32	1	1.2
Trachelomonas urceolata	0	1	1.2
Trachelomonas verrucosa	0	1	1.2
Trachelomonas volgensis	0	1	1.2
Trachelomonas volvocina	94	14	16.3
Treubaria setigerum	0	1	1.2
Treubaria triappendiculata	89	2	2.3
Volvox tertius	0	1	1.2

* $\bar{x}$ = Mean algal units per ml
** n = Number of occurrences
*** % = Percent occurrence

Although diatoms numerically dominated the flora of the inlet water, the species involved were not restricted to that habitat. No diatom achieving dominant status was found only in inlet waters; in fact, most were widespread and abundant in the other habitats. It appears that diatom dominance in inlets can be attributed to the scarcity of successfully competing non-diatom forms.

Centric diatoms predominated over pennate diatoms in abundance and accounted for 78 percent of all dominant diatom occurrences (Table 6). Most often they were species of the genera Melosira, Stephanodiscus, Skeletonema, and Cyclotella (Table 8). As a group, centric diatoms are associated with high nutrient water. Indeed, Melosira granulata, M. varians, Cyclotella meneghiniana, Stephanodiscus astraea, and Skeletonema potamos, all common to Atchafalaya (Table 7), are known to be indicator species of eutrophic waters and/or organic pollution (Hutchinson 1967, Palmer 1969, Weber 1970).

Melosira is of special interest since it was the most successful genus encountered in terms of dominance within the Atchafalaya Basin. It was represented by seven species and varieties, six of which attained dominance in at least one sample. The genus was excluded as a dominant form from the floras of Lake Verret and Pat Bay, both outside the Basin proper. Melosira was most important during the months immediately following minimum water levels, around December, and again at maximum water levels around April.

Melosira distans, the most common species in the study was most prominent from November through January, just after low water. Another period of prominence occurred during March and April, just before the high water maximum. Lowe (1974) classifies M. distans as an oligotrophic-dystrophic form, which is interesting because the Atchafalaya has a substantial nutrient load. However, due most probably to sediment load, light is not available to stimulate high primary production by algae. Wang (1974) noted this same phenomenon in the Illinois River. Melosira granulata and M. granulata var. angustissima, both eutrophic indicators, did not become dominant during the same low water periods as did M. distans, but together they peaked four times during the period of high water, extending from March through June.

Melosira varians, a noted indicator of eutrophic water (Lowe 1974), occurred as a dominant three times in three separate areas. It occurred in the east-side site (January), Buffalo Cove (April), and the Inlet (December), and during periods of low but rising water, and high water. The incidents are isolated with no apparent trends.

Skeletonema potamos, due to its fifteen occurrences as a major constituent of the flora, is of special interest. Weber (1970), using the species name Microsiphona potamos, found it to be widely distributed in rivers of the EPA Water Pollution Surveillance System but abundant only in alkaline streams receiving organic and/or inorganic enrichment. In his study, the organism was found to occur in large numbers from late May to December in Little Miami River, Cincinnati, Ohio. In our studies S. potamos attained dominance in December during low water at the inlet stations; in swamp areas it became important during high water periods in April and June as well.

TABLE 8. PHYTOPLANKTON GENUS OCCURRENCE AND DOMINANT OCCURRENCE

Genus	Occurrence	Dominant Occurrence	Genus	Occurrence	Dominant Occurrence
Achnanthes	7	-	*Cryptomonas*	66	32
Actinastrum	22	-	**Cyanophyta***	13	4
Amphora	1	-	*Cyclotella*	43	12
Anabaena	23	1	*Cylindrospermum ?*	1	-
Anabaenopsis	3	-	*Cymatopluera*	2	-
Ankistrodesmus	50	10	*Cymbella*	13	-
Aphanizomenon	8	-	**cyst***	3	-
Aphanocapsa	3	-	*Dactylococcopsis*	33	4
Aphanothece	1	-	*Diatoma*	5	-
Arthrospira	1	-	*Dictyosphaerium*	9	-
Asterionella	35	2	*Dinobryon*	7	-
Campylodiscus	1	-	**dinoflagellate***	1	-
Carteria	11	-	*Diploneis*	2	-
centric diatom*	27	14	*Elakatothrix*	7	-
Ceratium	4	-	*Epithemia*	4	-
Chaetoceras	1	-	*Euastrum*	1	-
Chilomonas	3	-	*Eudorina*	1	-
Chlamydomonas	24	5	*Euglena*	53	1
Chlorella	1	-	*Eunotia*	9	-
Chlorococcales*	5	-	**flagellate***	42	26
Chlorogonium	4	-	*Fragilaria*	6	-
Chaorophyta*	6	2	*Franceia*	2	-
Chroococcus	2	-	*Frustulia*	1	-
Chroomonas	16	10	*Glenodinium*	13	-
Chrysococcus	2	-	*Gloeocystis*	3	-
Chrysophyta*	1	-	*Golenkinia*	3	-
Closterium	31	-	*Gomphonema*	25	-
coccoid*	4	1	*Gonium*	1	1
Cocconeis	23	-	*Gymnodinium*	15	-
Coelastrum	16	1	*Gyrosigma*	15	-
Coscinodiscus	16	3	*Hantzchia*	5	-
Cosmarium	2	-	*Kirchneriella*	9	-
Crucigenia	19	-	*Lagerheimia*	1	-

TABLE 8. PHYTOPLANKTON GENUS OCCURRENCE AND DOMINANT OCCURRENCE (Continued)

Genus	Occurrence	Dominant Occurrence	Genus	Occurrence	Dominant Occurrence
Lepocinclis	15	-	*Planktonema*	2	-
lunate*	6	3	*Pleurosigma*	2	-
Lyngbya	10	4	*Pteromonas*	15	1
Mallomonas	5	-	Pyrrophyta*	1	-
Mastogloia	1	-	*Raphidiopsis*	5	1
Melosira	77	35	*Rhophalodia*	1	-
Merismopedia	20	-	*Rivularia*	1	-
Mesostigma	5	-	*Scenedesmus*	62	5
Micractinium	3	-	*Schizochlamys*	1	-
Microcystis	14	2	*Schroederia*	10	1
Mougeotia	1	-	*Skeletonema*	42	15
Navicula	35	5	*Spermatozoopsis*	7	-
Neidium	2	-	*Sphaerocystis*	2	-
Nephrocytium	2	-	*Staurastrum*	1	-
Nitzschia	51	15	*Stauroneis*	1	-
Ochromonas	1	1	*Stephanodiscus*	42	14
Oocystis	12	1	*Surirella*	11	-
Ophiocytium	2	-	*Synedra*	34	1
Oscillatoria	53	18	*Synura*	4	3
palmelloid*	4	-	*Tabellaria*	2	-
Pandorina	5	-	*Tetraedron*	21	-
Pediastrum	17	-	*Tetrastrum*	23	1
pennate diatom*	19	6	*Thorakomonas*	1	-
Peridinium	8	-	*Trachelomonas*	44	7
Phacus	33	1	*Treubaria*	6	-
Phormidium	5	1	*Ulothrix*	2	-
Pinnularia	2	-	*Volvox*	1	-

* Summary category of forms not identified to genus.

Throughout the Atchafalaya Basin, except in the inlet waters, a wide variety of flagellates attained dominant and subdominant positions. The Cryptophyceae (flagellates) ranked second in importance to the centric diatoms in providing major component species to the samples. This is especially interesting since only six species were identified in the Atchafalaya samples (Table 6).

The four major genera of flagellates in order of importance were Cryptomonas, Chroomonas, Trachelomonas. and Chlamydomonas. These and others can be considered associates of the swamps and backwater areas. As with the diatoms discussed previously, the genera and species observed represent forms reported to prefer organically enriched water.

Three species of Cryptomonas were identified in Atchafalaya samples and all attained dominance. Members of the genus achieved dominance on thirty-two occasions, making it second only to Melosira in importance in the Basin. Only two dominant occurrences were recorded in inlet samples and none in Lake Verret. The genus occurred widely in all other areas, with no apparent seasonal restrictions.

Although numerous genera (19) and species (85) of Chlorococcales occurred commonly (Table 7), they rarely became dominant constituents of samples. Most dominant occurrences within the group were attributable to Ankistrodesmus and Scenedesmus with 10 and 5 such occurrences respectively. All of the dominant Ankistrodesmus species occurrences appeared in non-inlet/outlet samples, particularly in the Fordoche-Buffalo Cove and Lake Verret-Pat Bay areas. Scenedesmus species was restricted as a dominant to inlet stations.

The blue-green algae (Cyanophyta) ranked fourth, both in the number of species present and in total number of occurrences. They ranked third, however, behind diatoms and Cryptophyceae in dominant occurrence. At times blue-green algae were quite prominent, totally dominating the flora of samples (e.g., Appendix; Lake Verret, 2216, 5-29-74). They did particularly well in swamp areas and Lake Verret. Oscillatoria species were more successful than any other blue-green alga.

IMPORTANCE OF PHYTOPLANKTON PRODUCTIVITY

The National Eutrophication Survey (NES) sampled 250 lakes in 17 southeastern States during 1973 (U.S. EPA 1975). In the selection of lakes for this study, strong emphasis was placed on those faced with actual or potential accelerated eutrophication problems. Chemical, physical, and biological data were collected in a similar manner as in the Atchafalaya River Basin Study, thereby making the two studies directly comparable.

Table 9 presents average algal units per milliliter, total phosphorus and inorganic nitrogen (Nitrite-Nitrate-N + Ammonia-N) concentrations, and Secchi disc values for both studies. The phosphorus and inorganic nitrogen levels encountered in both studies were extremely high.

The highest mean total phosphorus concentration occurred in the Basin proper, although it possessed the lowest mean algal count. This apparent anomaly (high nutrients and low algal counts) can best be explained by examining the light penetration data. The study areas immediately outside the Basin and the Basin proper had identical Secchi disc means. However, the data suggest that within the Basin the low light penetration is a cause of the low phytoplankton standing crop, whereas outside the Basin the low light penetration is a result of high algal production. In the inside system suspended sediments severely reduce light penetration and reduce algal production.

Also, the minor role that phytoplankton play in the productivity of the Basin proper can be demonstrated by the fact that mean algal counts were 15 times less in the Basin than in 1973 NES lakes and 35 times less than in those waters studied immediately outside the Basin.

TABLE 9. COMPARISON OF ALGAL UNITS PER MILLILITER, NUTRIENTS AND LIGHT PENETRATION IN THE ATCHAFALAYA BASIN AND THE 1973 NATIONAL EUTROPHICATION SURVEY LAKES

Parameter	National Eutrophication Survey 1973	Atchafalaya Basin Proper	Atchafalaya Outside
Mean algal units per milliliter	17,600	1,200	42,000
Mean total phosphorus (micrograms/liter)	143	194	148
Mean inorganic nitrogen (micrograms/liter)	742	613	590
Mean Secchi disc (inches)	48	13	13

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APPENDIX. SUMMARY OF PHYTOPLANKTON DATA

This appendix was generated by computer. Because it was only possible to use upper case letters in the printout, all scientific names are printed in upper case and are not italicized.

The alphabetic phytoplankton lists include taxa without species names (e.g., EUNOTIA, EUNOTIA #1, EUNOTIA ?, FLAGELLATE, FLAGELLATES, MICROSYSTIS INCERTA ?, CHLOROPHYTAN COCCOID CELLED COLONY). When species determinations were not possible, symbols or descriptive phrases were used to separate taxa for enumeration purposes. Each name on a list, however, represents a unique species different from any other name on the same list, unless otherwise noted, for counting purposes.

Numbers were used to separate unidentified species of the same genus. A generic name listed alone is also a unique species. A question mark (?) is placed immediately after the portion of a name which was assigned with uncertainty. Numbered, questioned, or otherwise designated taxa were established on a lake-by-lake basis; therefore NAVICULA #2 from lake A cannot be compared to NAVICULA #2 from lake B. Pluralized categories (e.g., FLAGELLATES, CENTRIC DIATOMS, SPP.) were used for counting purposes when taxa could not be properly differentiated on the counting chamber.

ATCHAFALAYA
STORET NUMBER: A001000

NYGAARD TROPHIC STATE INDICES

DATE	11 18 74	12 09 74	01 14 75
MYXOPHYCEAN	3.00 E	04/0 E	03/0 E
CHLOROPHYCEAN	4.00 F	04/0 E	05/0 E
EUGLENOPHYTE	0.14 ?	0.25 E	0/08 ?
DIATOM	1.40 E	0.83 E	0.46 E
COMPOUND	15.0 E	15/0 E	14/0 E

PALMER'S ORGANIC POLLUTION INDICES

DATE	11 18 74	12 09 74	01 14 75
GENUS	06	01	01
SPECIES	00	00	00

SPECIES DIVERSITY AND ABUNDANCE INDICES

DATE		11 18 74	12 09 74	01 14 75
AVERAGE DIVERSITY	H	2.22	2.91	1.33
NUMBER OF TAXA	S	22.00	24.00	29.00
NUMBER OF SAMPLES COMPOSITED	P	1.00	1.00	1.00
MAXIMUM DIVERSITY	MAXH	4.46	4.58	4.86
TOTAL DIVERSITY	C	885.78	3870.30	1067.99
TOTAL NUMBER OF INDIVIDUALS/ML	N	399.00	1330.00	803.00
EVENESS COMPONENT	J	0.50	0.64	0.27
MEAN NUMBER OF INDIVIDUALS/TAXA	L	18.14	55.42	27.69
NUMBER/ML OF MOST ABUNDANT TAXON	K	167.00	318.00	581.00

ATCHAFALAYA
STORET NUMBER: A001000 CONTINUED

TAXA	FORM	11 18 74 S	11 18 74 %C	11 18 74 ALGAL UNITS PER ML	12 09 74 S	12 09 74 %C	12 09 74 ALGAL UNITS PER ML	01 14 75 S	01 14 75 %C	01 14 75 ALGAL UNITS PER ML
ACHNANTHES #1	CEL									X
ACTINASTRUM HANTZSCHII V. FLUVIATILE	CEL	4	8.3	33			X			
ANABAENA	FIL						X			
ANKISTRODESMUS ?	CEL									
ANKISTRODESMUS FALCATUS	CEL			X						
ANKISTRODESMUS FALCATUS V. MIRABILIS	CEL					2.2	29	4	2.7	22
ASTERIONELLA FORMOSA	CEL			X			X			X
CENTRIC DIATOM	CEL			X	5	8.7	116			
CENTRIC DIATOMS	CEL									
CHLAMYDOMONAS GLOBOSA	CEL					2.2	29			
CHLOROPHYTAN COLONY	COL									X
CHROOCOCCUS	CEL							5	2.7	22
CHROOMONAS	CEL									X
CLOSTERIUM	CEL			X						
COCCOID CELL	CEL									
COCCONEIS	CEL									X
COELASTRUM	COL									X
COSCINODISCUS DENARIUS	CEL									
COSCINODISCUS LACUSTRIS	CEL									
COSCINODISCUS ROTHII V. SUBSALSA	CEL	3	8.3	33						X
CRUCIGENIA QUADRATA	COL									
CRYPTOMONAS	CEL									
CRYPTOMONAS ?	CEL	5	8.3	33						
CRYPTOMONAS EROSA	CEL					4.4	58			
CRYPTOMONAS REFLEXA	CEL									
CYANOPHYTAN FILAMENT	FIL									X
CYCLOTELLA	CEL									
CYCLOTELLA MENENGHINIANA	CEL	2	41.9	167						
CYMATOPLEURA SOLEA	CEL									

ATCHAFALAYA
STORET NUMBER: A001000 CONTINUED

TAXA	FORM	11 18 74 S	11 18 74 %C	11 18 74 ALGAL UNITS PER ML	12 09 74 S	12 09 74 %C	12 09 74 ALGAL UNITS PER ML	01 14 75 S	01 14 75 %C	01 14 75 ALGAL UNITS PER ML
CYMBELLA	CEL						X			X
DACTYLOCOCCOPSIS IRREGULARIS	CEL					2.2	29			
DIATOMA VULGARE	CEL									X
DINOBRYON SERTULARIA	CEL									
EUGLENA	CEL			X						
EUGLENA #1	CEL						X			
EUGLENA ACUS	CEL									
FRAGILARIA	CEL									
FRAGILARIA CROTONENSIS	CEL						X			X
FRUSTULIA RHOMBOIDES	CEL									X
GOMPHONEMA	CEL			X						
GYROSIGMA	CEL									
GYROSIGMA SCALPROIDES	CEL									X
MELOSIRA	CEL			X						
MELOSIRA #1	CEL							2	11.1	89
MELOSIRA DISTANS	CEL			X	3	23.9	318	3	11.1	89
MELOSIRA GRANULATA	CEL									
MELOSIRA ITALICA	CEL									X
MELOSIRA ITALICA ?	CEL				2	17.4	231			
MELOSIRA VARIANS	CEL									X
MICROCYSTIS INCERTA	COL									
NAVICULA	CEL			X						
NAVICULA #1	CEL									X
NAVICULA #2	CEL									X
NAVICULA ZANONI	CEL									
NEIDIUM	CEL									X
NEIDIUM IRIDIS	CEL						X			
NITZSCHIA	CEL						X			
NITZSCHIA #1	CEL									
NITZSCHIA #2	CEL									
NITZSCHIA TRYBLIONELLA ?	CEL									X
OSCILLATORIA	FIL						X			

ATCHAFALAYA
STORET NUMBER: A001000 CONTINUED

TAXA	FORM	11 18 74			12 09 74			01 14 75		
		S	%C	ALGAL UNITS PER ML	S	%C	ALGAL UNITS PER ML	S	%C	ALGAL UNITS PER ML
OSCILLATORIA #1	FIL	1	25.1	100						
OSCILLATORIA #2	FIL		8.3	33						
OSCILLATORIA LIMNETICA	FIL			X			X			X
PALMELLOID COLONY	COL						X			
PEDIASTRUM BORYANUM	COL									
PEDIASTRUM DUPLEX V. RETICULATUM	COL									
PENNATE	CEL									
PTEROMONAS ANGULOSA	CEL									
SCENEDESMUS ACUMINATUS	COL									
SCENEDESMUS BICAUDATUS	COL			X						
SCENEDESMUS DIMORPHUS	CEL						X			X
SCENEDESMUS INTERMEDIUS V. BICAUDATUS	COL					2.2	29			
SCENEDESMUS OPOLIENSIS	COL									X
SCENEDESMUS PROTUBERANS	COL									
SCENEDESMUS QUADRICAUDA	COL			X						X
SKELETONEMA POTAMOS	CEL			X	4	19.5	260			
STEPHANODISCUS	CEL				1	15.2	202	1	72.4	581
STEPHANODISCUS ASTRAEA	CEL			X						
STEPHANODISCUS NIAGARAE	CEL									
SURIRELLA	CEL									
SYNEDRA	CEL			X			X			
SYNEDRA GAILLONII	CEL			X						
SYNEDRA ULNA	CEL									X
TRACHELOMONAS	CEL									
TRACHELOMONAS INTERMEDIA	CEL					2.2	29			
TOTAL				399			1330			803

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                 ATCHAFALAYA
      STCRET NUMBER: A001000      CONTINUED

                                       NYGAARD TROPHIC STATE INDICES

                             DATE    04 17 75   06 10 75   12 18 75

                      MYXOPHYCEAN    0/01 D     02/0 E     02/0 E
                    CHLORCPHYCEAN    4.00 E     04/0 E     02/0 E
                     EUGLENOPHYTE    0.50 E     0.33 E     0.25 E
                           CIATOM    2.25 E     0.57 E     0.86 E
                         COMPOUND    15.0 E     12/0 E     11/0 E


                                  PALMER'S ORGANIC POLLUTION INDICES

                             DATE    04 17 75   06 10 75   12 18 75

                            GENUS       01         01         05
                          SPECIES       00         00         00


                                 SPECIES DIVERSITY AND ABUNDANCE INDICES

                             DATE      04 17 75   06 10 75   12 18 75

               AVERAGE DIVERSITY  H       2.74       2.36       3.69
                  NUMBER OF TAXA  S      27.00      20.00      18.00
      NUMBER OF SAMPLES COMPOSITED  M     1.00       1.00       1.00
           MAXIMUM DIVERSITY  MAXH        4.75       4.32       4.17
                 TOTAL DIVERSITY  D    1394.66     908.60    2889.27
    TOTAL NUMBER OF INDIVIDUALS/ML  N   509.00     385.00     783.00
              EVENESS COMPONENT  J        0.58       0.55       0.88
    MEAN NUMBER OF INDIVIDUALS/TAXA  L   18.85      19.25      43.50
  NUMBER/ML OF MOST ABUNDANT TAXON  K   169.00     129.00     166.00
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ATCHAFALAYA
STORET NUMBER: A001000 CONTINUED

TAXA	FORM	04 17 75 S	04 17 75 %C	04 17 75 ALGAL UNITS PER ML	06 10 75 S	06 10 75 %C	06 10 75 ALGAL UNITS PER ML	12 18 75 S	12 18 75 %C	12 18 75 ALGAL UNITS PER ML
ACHNANTHES #1	CEL									
ACTINASTRUM HANTZSCHII V. FLUVIATILE	CEL			X						
ANABAENA	FIL						X			
ANKISTRODESMUS ?	CEL					8.3	32			
ANKISTRODESMUS FALCATUS	CEL									
ANKISTRODESMUS FALCATUS V. MIRABILIS	CEL									
ASTERIONELLA FORMOSA	CEL			X	3	16.6	64			
CENTRIC DIATOM	CEL									
CENTRIC DIATOMS	CEL		6.7	34						
CHLAMYDOMONAS GLOBOSA	CEL			X						
CHLOROPHYTAN COLONY	CCL									
CHROOCOCCUS	CEL									
CHROOMONAS	CEL	1	33.2	169						
CLOSTERIUM	CEL		6.7	34						
COCCOID CELL	CEL						X			
COCCONEIS	CEL			X						
COELASTRUM	CCL									
COSCINODISCUS DENARIUS	CEL			X						
COSCINODISCUS LACUSTRIS	CEL			X			X			
COSCINODISCUS ROTHII V. SUBSALSA	CEL			X					3.8	30
CRUCIGENIA QUADRATA	CCL			X						
CRYPTOMONAS	CEL	2	13.4	68						
CRYPTOMONAS ?	CEL									
CRYPTOMONAS EROSA	CEL			X						
CRYPTOMONAS REFLEXA	CEL			X						
CYANOPHYTAN FILAMENT	FIL									
CYCLOTELLA	CEL							3	11.6	91
CYCLOTELLA MENEGHINIANA	CEL			X						
CYMATOPLEURA SOLEA	CEL								3.8	30

ATCHAFALAYA
STORET NUMBER: A001000 CONTINUED

TAXA	FORM	04 17 75			06 10 75			12 18 75		
		S	%C	ALGAL UNITS PER ML	S	%C	ALGAL UNITS PER ML	S	%C	ALGAL UNITS PER ML
CYMBELLA	CEL								3.8	30
CACTYLOCOCCOPSIS IRREGULARIS	CEL									
DIATOMA VULGARE	CEL								1.9	15
DINCBRYCN SERTULARIA	CEL		6.7	34						
EUGLENA	CEL			X			X		3.8	30
EUGLENA #1	CEL									
EUGLENA ACUS	CEL						X			
FRAGILARIA	CEL								3.8	30
FRAGILARIA CROTONENSIS	CEL									
FRUSTULIA RHOMBOIDES	CEL									
GOMPHONEMA	CEL									
GYROSIGMA	CEL			X						
GYROSIGMA SCALPROIDES	CEL									
MELOSIRA	CEL									
MELOSIRA #1	CEL									
MELOSIRA DISTANS	CEL	4	13.4	68				2	17.4	136
MELOSIRA GRANULATA	CEL	3	13.4	68	2	24.9	96			
MELOSIRA ITALICA	CEL								3.8	30
MELOSIRA ITALICA ?	CEL									
MELCSIRA VARIANS	CEL									
MICROCYSTIS INCERTA	COL						X			
NAVICULA	CEL									
NAVICULA #1	CEL									
NAVICULA #2	CEL									
NAVICULA ZANONI	CEL						X			
NEIDIUM	CEL									
NEIDIUM IRIDIS	CEL									
NITZSCHIA	CEL				5	8.3	32			
NITZSCHIA #1	CEL						X		3.8	30
NITZSCHIA #2	CEL						X		3.8	30
NITZSCHIA TRYBLIONELLA ?	CEL									
OSCILLATORIA	FIL								3.8	30

ATCHAFALAYA
STORET NUMBER: A001000 CONTINUED

TAXA	FORM	04 17 75			06 10 75			12 18 75		
		S	%C	ALGAL UNITS PER ML	S	%C	ALGAL UNITS PER ML	S	%C	ALGAL UNITS PER ML
OSCILLATORIA #1	FIL									
OSCILLATORIA #2	FIL									
OSCILLATORIA LIMNETICA	FIL								1.9	15
PALMELLOID COLONY	COL									
PEDIASTRUM BORYANUM	COL						X			
PEDIASTRUM DUPLEX V. RETICULATUM	COL						X			
PENNATE	CEL								1.9	15
PTEROMONAS ANGULOSA	CEL			X						
SCENEDESMUS ACUMINATUS	COL			X						
SCENEDESMUS BICAUDATUS	COL									
SCENEDESMUS DIMORPHUS	CEL			X			X		1.9	15
SCENEDESMUS INTERMEDIUS V. BICAUDATUS	COL									
SCENEDESMUS OPOLIENSIS	COL									
SCENEDESMUS PROTUBERANS	COL							4	3.8	30
SCENEDESMUS QUADRICAUDA	COL									
SKELETONEMA POTAMOS	CEL			X			X	5	3.8	30
STEPHANODISCUS	CEL			X						
STEPHANODISCUS ASTRAEA	CEL							1	21.2	166
STEPHANODISCUS NIAGARAE	CEL				1	33.5	129			
SURIRELLA	CEL			X						
SYNEDRA	CEL						X			
SYNEDRA GAILLONII	CEL									
SYNEDRA ULNA	CEL				4	8.3	32			
TRACHELOMONAS	CEL	5	6.7	34						
TRACHELOMONAS INTERMEDIA	CEL									
TOTAL				509			385			783

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              ATCHAFALAYA
     STORET NUMBER: AC02C00

                                 NYGAARD TROPHIC STATE INDICES

                        DATE    11 18 74   12 09 74   01 14 75

                 MYXOPHYCEAN    0/01 O     1.00 E     0/01 O
               CHLOROPHYCEAN    0/01 O     2.00 E     1.00 E
                EUGLENOPHYTE    0/0  ?     0.33 E     2.00 E
                      DIATOM    2.00 E     02/0 E     1.00 E
                    COMPOUND    2.00 E     6.00 E     6.00 E


                                PALMER'S ORGANIC POLLUTION INDICES

                        DATE    11 18 74   12 09 74   01 14 75

                       GENUS          03         01         00
                     SPECIES          00         00         00


                               SPECIES DIVERSITY AND ABUNDANCE INDICES

                        DATE    11 18 74   12 09 74   01 14 75

           AVERAGE DIVERSITY    H       0.01       1.36       1.85
              NUMBER OF TAXA    S       5.00       9.00      12.00
  NUMBER OF SAMPLES COMPOSITED  M       1.00       1.00       1.00
           MAXIMUM DIVERSITY MAXH       2.32       3.17       3.58
             TOTAL DIVERSITY    D       0.65     584.80     414.40
  TOTAL NUMBER OF INDIVIDUALS/ML N     65.00     430.00     224.00
          EVENESS COMPONENT     J       0.00       0.43       0.52
  MEAN NUMBER OF INDIVIDUALS/TAXA L    13.00      47.78      18.67
 NUMBER/ML OF MOST ABUNDANT TAXON K    65.00     215.00      96.00
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ATCHAFALAYA
STCRET NUMBER: A002000 CONTINUED

TAXA	FORM	11 18 74 S	11 18 74 %C	11 18 74 ALGAL UNITS PER ML	12 09 74 S	12 09 74 %C	12 09 74 ALGAL UNITS PER ML	01 14 75 S	01 14 75 %C	01 14 75 ALGAL UNITS PER ML
ANABAENA	FIL									
ANABAENA PLANCTONICA	FIL									
ANKISTRODESMUS ?	CEL									
CENTRIC DIATOM	CEL									
CERATIUM HIRUNDINELLA								1	42.9	96
F. FURCOIDES	CEL									
CHLAMYDOMONAS	CEL									
CHLOROPHYTAN CYST	CEL						X			
CLOSTERIUM	CEL									
CRUCIGENIA QUADRATA	COL			X			X			
CRYPTOMONAS	CEL									
CRYPTOMONAS MARSSONII	CEL									
CYANOPHYTAN FILAMENT	FIL						X			
CYCLOTELLA	CEL				3	10.0	43			
CYCLOTELLA MENENGHINIANA	CEL									
CYMBELLA	CEL									
CYST ?	CEL									
DACTYLOCOCCOPSIS	CEL									
DACTYLOCOCCOPSIS IRREGULARIS	CEL									
DICTYOSPHAERIUM EHRENBERGIANUM	COL									
ELAKATOTHRIX GELATINOSA	CEL									
EPITHEMIA	CEL									
EUDORINA ELEGANS	COL									
EUGLENA #1	CEL									
EUGLENA #2	CEL									
EUGLENA GRACILIS	CEL									
EUGLENA TRIPTERIS	CEL									
EUNOTIA	CEL									X
FLAGELLATE #1	CEL									X
FLAGELLATE #3	CEL			X						
FLAGELLATES	CEL									
GLENODINIUM OCULATUM	CEL							3	14.3	32
										X

ATCHAFALAYA
STORET NUMBER: A002000 CONTINUED

TAXA	FORM	11 18 74			12 09 74			01 14 75		
		S	%C	ALGAL UNITS PER ML	S	%C	ALGAL UNITS PER ML	S	%C	ALGAL UNITS PER ML
GONIUM PECTORALE	COL									
GYMNODINIUM ALBULUM	CEL									
GYROSIGMA SCALPROIDES	CEL									
LYNGBYA ?	FIL									
MELOSIRA	CEL									X
MELOSIRA DISTANS	CEL				2	40.0	172			X
MELOSIRA GRANULATA	CEL			X	1	50.0	215			
MELOSIRA VARIANS	CEL									
MICROCYSTIS INCERTA	COL									
NAVICULA	CEL	1	100.	65						
NITZSCHIA #1	CEL									
NITZSCHIA #2	CEL									
NITZSCHIA #3	CEL									
NITZSCHIA ACICULARIS	CEL									
NITZSCHIA LORENZIANA ?	CEL									
OOCYSTIS	COL									
OSCILLATORIA	FIL									
OSCILLATORIA ?	FIL									
OSCILLATORIA LIMNETICA	FIL									
PALMELLOID COLONY	CEL									
PEDIASTRUM DUPLEX	COL									
PENNATE	CEL							2	28.6	64
PERIDINIUM UMBONATUM	CEL									
PHACUS	CEL						X	4	14.3	32
PHACUS CURVICAUDA	CEL									
SCENEDESMUS	COL						X			
SCENEDESMUS DIMORPHUS	COL						X			
SCENEDESMUS QUADRICAUDA	COL									
SKELETONEMA POTAMOS	CEL									
STAURASTRUM	CEL									X
STEPHANODISCUS	CEL			X						
SYNEDRA	CEL									

ATCHAFALAYA
STORET NUMBER: AC02000 CONTINUED

TAXA	FORM	11 18 74 S	11 18 74 %C	11 18 74 ALGAL UNITS PER ML	12 09 74 S	12 09 74 %C	12 09 74 ALGAL UNITS PER ML	01 14 75 S	01 14 75 %C	01 14 75 ALGAL UNITS PER ML
SYNEDRA ACUS	CEL									
TABELLARIA FENESTRATA	CEL									X
TETRAEDRON MINIMUM	CEL									
TETRASTRUM	COL									
TETRASTRUM STAUROGENIAEFORME	COL									X
TRACHELOMONAS	CEL									
TRACHELOMONAS CALDATA ?	CEL									
TRACHELOMONAS CREBEA	CEL									
TRACHELOMONAS INTERMEDIA ?	CEL									
VOLVOX TERTIUS	COL									
TOTAL				65			430			224

ATCHAFALAYA
STCRET NUMBER: A092000 CONTINUED

NYGAARC TROPHIC STATE INDICES

DATE	04 17 75	06 10 75	12 18 75
MYXOPHYCEAN	3.00 E	04/0 E	4.00 E
CHLOROPHYCEAN	2.00 E	02/0 E	6.00 E
EUGLENOPHYTE	0.60 E	0.33 E	0.50 E
DIATCM	1.00 E	0.80 E	0.67 E
COMPOUND	10.0 E	12/0 E	19.0 E

PALMER'S CRGANIC POLLUTION INDICES

DATE	04 17 75	06 10 75	12 18 75
GENUS	01	02	07
SPECIES	00	00	00

SPECIES DIVERSITY AND ABUNDANCE INDICES

DATE		04 17 75	06 10 75	12 18 75
AVERAGE DIVERSITY	H	1.59	2.24	0.46
NUMBER OF TAXA	S	19.00	19.00	32.00
NUMBER OF SAMPLES COMPOSITED	M	1.00	1.00	1.00
MAXIMUM DIVERSITY	MAXH	4.25	4.25	5.00
TOTAL DIVERSITY	D	1793.52	4744.32	16949.16
TOTAL NUMBER OF INDIVIDUALS/ML	N	1128.00	2118.00	36846.00
EVENESS COMPONENT	J	0.37	C.53	0.09
MEAN NUMBER CF INDIVIDUALS/TAXA	L	59.37	111.47	1151.44
NUMBER/ML OF MOST ABUNDANT TAXON	K	752.00	1059.00	35015.00

ATCHAFALAYA
STORET NUMBER: A002000 CONTINUED

TAXA	FORM	04 17 75 S	04 17 75 %C	04 17 75 ALGAL UNITS PER ML	06 10 75 S	06 10 75 %C	06 10 75 ALGAL UNITS PER ML	12 18 75 S	12 18 75 %C	12 18 75 ALGAL UNITS PER ML
ANABAENA	FIL				4	4.2	88			X
ANABAENA PLANCTONICA	FIL	3	4.2	47						
ANKISTRODESMUS ?	CEL								0.2	85
CENTRIC DIATOM	CEL									
CERATIUM HIRUNDINELLA F. FURCOIDES	CEL			X						
CHLAMYDOMONAS	CEL									X
CHLOROPHYTAN CYST	CEL			X						
CLOSTERIUM	CEL			X						X
CRUCIGENIA QUADRATA	COL	5	4.2	47						
CRYPTOMONAS	CEL						X	5	0.5	170
CRYPTOMONAS MARSSONII	CEL	1	66.7	752						
CYANOPHYTAN FILAMENT	FIL									
CYCLOTELLA	CEL				5	12.5	265			
CYCLOTELLA MENENGHINIANA	CEL							1	95.0	35015
CYMBELLA	CEL									X
CYST ?	CEL									X
DACTYLOCOCCOPSIS	CEL						X			
DACTYLOCOCCOPSIS IRREGULARIS	CEL								0.6	213
DICTYOSPHAERIUM EHRENBERGIANUM	COL									X
ELAKATOTHRIX GELATINOSA	CEL	4	4.2	47						
EPITHEMIA	CEL						X			
EUDORINA ELEGANS	COL			X						
EUGLENA #1	CEL								0.1	43
EUGLENA #2	CEL									X
EUGLENA GRACILIS	CEL									X
EUGLENA TRIPTERIS	CEL									
EUNOTIA	CEL									
FLAGELLATE #1	CEL									
FLAGELLATE #3	CEL									X
FLAGELLATES	CEL									
GLENODINIUM OCULATUM	CEL									

ATCHAFALAYA
STORET NUMBER: A002000 CONTINUED

TAXA	FORM	04 17 75 S	04 17 75 %C	04 17 75 ALGAL UNITS PER ML	06 10 75 S	06 10 75 %C	06 10 75 ALGAL UNITS PER ML	12 18 75 S	12 18 75 %C	12 18 75 ALGAL UNITS PER ML
GONIUM PECTORALE	COL			X					0.1	43
GYMNODINIUM ALBULUM	CEL						X			
GYROSIGMA SCALPROIDES	CEL						X			
LYNGBYA ?	FIL									
MELOSIRA	CEL									X
MELOSIRA DISTANS	CEL	2	16.7	188	1	50.0	1059	3	0.7	255
MELOSIRA GRANULATA	CEL						X			
MELOSIRA VARIANS	CEL									X
MICROCYSTIS INCERTA	COL					2.1	44			
NAVICULA	CEL							2	0.9	340
NITZSCHIA #1	CEL			X						X
NITZSCHIA #2	CEL								0.2	85
NITZSCHIA #3	CEL						X			
NITZSCHIA ACICULARIS	CEL								0.2	85
NITZSCHIA LORENZIANA ?	CEL					4.2	88			
OOCYSTIS	COL									
OSCILLATORIA	FIL			X			X			
OSCILLATORIA ?	FIL									X
OSCILLATORIA LIMNETICA	FIL		4.2	47				4	0.3	128
PALMELLOID COLONY	CEL						X			
PEDIASTRUM DUPLEX	COL									
PENNATE	CEL						X			
PERIDINIUM UMBONATUM	CEL					2.1	44			
PHACUS	CEL									
PHACUS CURVICAUDA	CEL			X						
SCENEDESMUS	COL									X
SCENEDESMUS DIMORPHUS	CCL									X
SCENEDESMUS QUADRICAUDA	COL								C.5	170
SKELETONEMA POTAMOS	CEL									
STAURASTRUM	CEL				3	12.5	265			
STEPHANODISCUS	CEL			X			X		0.1	43
SYNEDRA	CEL									

ATCHAFALAYA
STORET NUMBER: A002000 CONTINUED

TAXA	FORM	04 17 75 S	04 17 75 %C	04 17 75 ALGAL UNITS PER ML	06 10 75 S	06 10 75 %C	06 10 75 ALGAL UNITS PER ML	12 18 75 S	12 18 75 %C	12 18 75 ALGAL UNITS PER ML
SYNEDRA ACUS	CEL									
TABELLARIA FENESTRATA	CEL			X						
TETRAEDRCN MINIMUM	CEL								0.1	43
TETRASTRUM	COL									
TETRASTRUM STAURCGENIAEFORME	COL								0.3	128
TRACHELCMONAS	CEL				2	12.5	265			X
TRACHELCMONAS CAUDATA ?	CEL									X
TRACHELCMCNAS CREBEA	CEL			X						
TRACHELCMCNAS INTERMEDIA ?	CEL			X						
VCLVOX TERTIUS	COL			X						
TOTAL				1128			2118			36846

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             ATCHAFALAYA
      STORET NUMBER: 8001000

                                        NYGAARD TROPHIC STATE INDICES

                                    DATE   12 09 74

                             MYXOPHYCEAN    03/0 E
                            CHLOROPHYCEAN   02/0 E
                            EUGLENOPHYTE    0/05 ?
                                  DIATOM    0.80 E
                                COMPOUND    09/0 E


                                       PALMER'S ORGANIC POLLUTION INDICES

                                    DATE   12 09 74

                                   GENUS        01
                                 SPECIES        02


                                     SPECIES DIVERSITY AND ABUNDANCE INDICES

                                    DATE   12 09 74

                    AVERAGE DIVERSITY    H      1.40
                       NUMBER OF TAXA    S     16.00
          NUMBER OF SAMPLES COMPOSITED   M      1.00
                    MAXIMUM DIVERSITY MAXH      4.00
                      TOTAL DIVERSITY    D   1033.20
        TOTAL NUMBER OF INDIVIDUALS/ML   N    738.00
                    EVENESS COMPONENT    J      0.35
       MEAN NUMBER OF INDIVIDUALS/TAXA   L     46.13
      NUMBER/ML OF MOST ABUNDANT TAXON   K    510.00
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ATCHAFALAYA
STORET NUMBER: B001000 CONTINUED

TAXA	FORM	S	%C	12 09 74 ALGAL UNITS PER ML
ACTINASTRUM HANTZSCHII V. FLUVIATILE	CEL			X
ANKISTRODESMUS	CEL			X
ASTERIONELLA FORMOSA	CEL			X
CHLAMYDOMONAS GLOBOSA	CEL	3	3.4	25
CHROOMONAS	CEL	4	6.9	51
DACTYLOCOCCOPSIS IRREGULARIS	CEL			X
MELOSIRA DISTANS	CEL			X
MELOSIRA GRANULATA	CEL			X
MELOSIRA VARIANS	CEL	1	69.1	510
NITZSCHIA #1	CEL			X
NITZSCHIA #2	CEL			X
OSCILLATORIA	FIL			X
OSCILLATORIA LIMNETICA	FIL			X
PENNATE	CEL	5	3.4	25
STEPHANODISCUS	CEL	2	17.2	127
SYNEDRA ULNA	CEL			X
TOTAL				738

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          ATCHAFALAYA
STCRET NUMBER: BC02CC0

                                        NYGAARD TROPHIC STATE INDICES

                                CATE   12 17 75

                        MYXOPHYCEAN    01/0 E
                      CHLOROPHYCEAN    03/0 E
                       EUGLENOPHYTE    0.25 E
                             DIATOM    1.25 E
                           COMPCUND    10/0 E


                                        PALMER'S ORGANIC POLLUTION INDICES

                                DATE   12 17 75

                              GENUS         01
                            SPECIES         00


                                        SPECIES CIVERSITY AND ABUNDANCE INDICES

                                DATE   12 17 75

                AVERAGE DIVERSITY     H       2.37
                    NUMBER OF TAXA    S      16.00
      NUMBER CF SAMPLES COMPOSITED    M       1.00
                 MAXIMUM DIVERSITY MAXH       4.00
                   TOTAL DIVERSITY    D    2803.71
    TOTAL NUMBER OF INDIVIDUALS/ML    N    1183.00
                 EVENESS COMPCNENT    J       0.59
    MEAN NUMBER OF INDIVIDUALS/TAXA   L      73.94
   NUMBER/ML CF MOST ABUNDANT TAXCN   K     423.00
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ATCHAFALAYA
STORET NUMBER: 8002000 CONTINUED

TAXA	FORM	12 17 75 S	 %C	 ALGAL UNITS PER ML
ASTERIONELLA FORMOSA	CEL			X
CERATIUM HIRUNDINELLA F. BRACHYCERAS	CEL			X
EUGLENA GRACILIS	CEL		3.6	42
GYROSIGMA	CEL			X
MELOSIRA DISTANS	CEL	3	17.8	211
MELOSIRA ITALICA	CEL	2	35.8	423
NITZSCHIA	CEL		3.6	42
OOCYSTIS PUSILLA	CEL			X
OSCILLATORIA	FIL			X
SCENEDESMUS ACUMINATUS	COL			X
SCENEDESMUS QUADRICAUDA	COL	5	3.6	42
SKELETONEMA POTAMOS	CEL	4	14.3	169
STEPHANODISCUS ASTRAEA	CEL			X
STEPHANODISCUS NIAGARAE	CEL			X
STEPHANODISCUS SPP.	CEL	1	21.5	254
SYNEDRA ULNA	CEL			X
TOTAL				1183

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                 ATCHAFALAYA
      STORET NUMBER: E001000

                                        NYGAARD TROPHIC STATE INDICES

                                  DATE  03 19 74  12 09 74  01 15 75

                           MYXOPHYCEAN   4.00 E    02/0 E    1.00 E
                         CHLOROPHYCEAN   1.00 E    02/0 E    1.00 E
                          EUGLENOPHYTE   1.00 E    1.25 E    0/02 ?
                                DIATOM   0.75 E    1.67 E    0.60 E
                              COMPOUND   13.0 E    14/0 E    5.00 E


                                        PALMER'S ORGANIC POLLUTION INDICES

                                  DATE  03 19 74  12 09 74  01 15 75

                                 GENUS       00        04        03
                               SPECIES       00        00        00


                                        SPECIES DIVERSITY AND ABUNDANCE INDICES

                                  DATE  03 19 74  12 09 74  01 15 75

               AVERAGE DIVERSITY     H       3.35      3.03      2.50
                 NUMBER OF TAXA      S      20.00     29.00     15.00
     NUMBER OF SAMPLES COMPOSITED    M       1.00      1.00      1.00
           MAXIMUM DIVERSITY      MAXH       4.32      4.86      3.91
                TOTAL DIVERSITY      D     710.20   2802.75   1110.00
  TOTAL NUMBER OF INDIVIDUALS/ML     N     212.00    925.00    444.00
             EVENESS COMPONENT       J       0.78      0.62      0.64
    MEAN NUMBER OF INDIVIDUALS/TAXA  L      10.60     31.90     29.60
 NUMBER/ML OF MOST ABUNDANT TAXON    K      66.00    240.00    206.00
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ATCHAFALAYA
STORET NUMBER: E001000 CONTINUED

TAXA	FORM	03 19 74			12 09 74			01 15 75		
		S	%C	ALGAL UNITS PER ML	S	%C	ALGAL UNITS PER ML	S	%C	ALGAL UNITS PER ML
ACTINASTRUM HANTZSCHII	COL								7.7	34
ANABAENA	FIL		4.2	9						
ANABAENA #1	FIL									
ANABAENA #2	FIL									
ANKISTRODESMUS	CEL									
APHANOCAPSA	COL									
ASTERIONELLA FORMOSA	CEL		1.9	4				2	7.7	34
CARTERIA	CEL					3.7	34			
CENTRIC DIATOM	CEL	2	18.4	39						
CENTRIC DIATOMS	CEL				5	7.5	69			
CHLAMYDOMONAS	CEL				2	11.1	103			X
CLOSTERIUM	CEL			X						X
COCCONEIS	CEL						X			
CRUCIGENIA FENESTRATA	COL									
CRUCIGENIA TETRAPEDIA	COL					3.7	34			
CRYPTOMONAS EROSA	CEL									
CRYPTOMONAS MARSSONII	CEL						X	1	46.4	206
CRYPTOMONAS REFLEXA ?	CEL									
CRYPTOMONAS SPP.	CEL	1	31.1	66						
CYANOPHYTAN FILAMENT	FIL									
CYCLOTELLA #1	CEL									
CYCLOTELLA MENENGHINIANA	CEL								7.7	34
CYCLOTELLA SPP.	CEL									
DACTYLOCOCCOPSIS	CEL					3.7	34			
DACTYLOCOCCOPSIS IRREGULARIS	CEL								7.7	34
DINOBRYON	CEL						X			
DINOBRYON BAVARICUM	CEL									X
DINOBRYON DIVERGENS	CEL									
EUGLENA	CEL		1.9	4			X			
EUGLENA #1	CEL									
EUGLENA ACUS	CEL			X						
EUGLENA TRIPTERIS	CEL									

ATCHAFALAYA
STCRET NUMBER: E001000 CONTINUEC

TAXA	FCRM	03 19 74			12 09 74			01 15 75		
		S	%C	ALGAL UNITS PER ML	S	%C	ALGAL UNITS PER ML	S	%C	ALGAL UNITS PER ML
FLAGELLATE	CEL		1.9	4						
FLAGELLATE #1	CEL						X			
FLAGELLATE #3	CEL						X			
FLAGELLATES	CEL				1	25.9	240			
GLENCDINIUM OCULATUM	CEL									
GYMNODINIUM ORDINATUM	CEL					3.7	34			
GYROSIGMA ?	CEL									X
LEPOCINCLIS	CEL						X			
MELOSIRA	CEL									X
MELOSIRA DISTANS	CEL	4	8.5	18			X			
MELOSIRA GRANULATA	CEL									
MELOSIRA GRANULATA V. ANGUSTISSIMA	CEL									
MELOSIRA GRANULATA V. ANGUSTISSIMA F. SPIRALIS	CEL						X			
MELOSIRA VARIANS	CEL		1.9	4			X			X
MERISMOPEDIA PUNCTATA	CEL		4.2	9						
MERISMOPEDIA TENUISSIMA	COL						X			
MESOSTIGMA VIRIDIS	CEL						X			
NAVICULA	CEL		1.9	4			X			
NAVICULA #1	CEL							4	7.7	34
NAVICULA #2	CEL							5	7.7	34
NITZSCHIA ?	CEL		1.9	4						
NITZSCHIA #1	CEL									
NITZSCHIA #2	CEL									
NITZSCHIA #3	CEL									
NITZSCHIA PALEA	CEL						X			
NITZSCHIA SPP.	CEL									
OSCILLATORIA	FIL	5	4.2	9						
OSCILLATORIA #1	FIL									
OSCILLATORIA #2	FIL									
OSCILLATORIA LIMNETICA	FIL		1.9	4						

ATCHAFALAYA
STORET NUMBER: EC010CO CONTINUED

		03 19 74			12 09 74			01 15 75		
TAXA	FORM	S	%C	ALGAL UNITS PER ML	S	%C	ALGAL UNITS PER ML	S	%C	ALGAL UNITS PER ML
PANDORINA	COL									
PENNATE	CEL		1.9	4						
PHACUS	CEL		1.9	4			X			
PHACUS #1	CEL									
PHACUS TORTUS	CEL									
PTEROMONAS ANGULOSA	CEL					3.7	34			
PTEROMONAS CRUCIATA	CEL						X			
SCENEDESMUS INTERMEDIUS	COL									
SCENEDESMUS PROTUBERANS ?	COL									
SCENEDESMUS SPP.	COL									
SCHROEDERIA SETIGERA	CEL									
SKELETONEMA POTAMOS	CEL				3	22.3	206			
SYNEDRA	CEL							3	7.7	34
SYNURA UVELLA	CEL				4	11.1	103			X
TETRAEDRON MINIMUM	CEL					3.7	34			
TETRAEDRON REGULARE V. GRANULATA	CEL									
TETRAEDRON TRIGONUM	CEL		1.9	4						
TRACHELOMONAS	CEL	3	8.5	18						
TRACHELOMONAS INTERMEDIA	CEL						X			
TRACHELOMONAS SCHAUINSLANDII	CEL		1.9	4						
TRACHELOMONAS VOLVOCINA	CEL						X			
TREUBARIA	CEL									
TOTAL				212			925			444

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                ATCHAFALAYA
 STORET NUMBER: E001000        CONTINUED

                                     NYGAARD TROPHIC STATE INDICES

                                 DATE    04 14 75   06 11 75

                          MYXOPHYCEAN    02/0 E     04/0 E
                        CHLOROPHYCEAN    01/0 E     08/0 E
                         EUGLENOPHYTE    0/03 ?     0.58 E
                               DIATOM    4.00 E     1.25 E
                             COMPOUND    07/0 E     24/0 E


                                     PALMER'S ORGANIC POLLUTION INDICES

                                 DATE    04 14 75   06 11 75

                                GENUS          01         12
                              SPECIES          00         00


                                     SPECIES DIVERSITY AND ABUNDANCE INDICES

                                 DATE    04 14 75   06 11 75

              AVERAGE DIVERSITY     H        1.85       2.90
                 NUMBER OF TAXA     S       11.00      37.00
    NUMBER OF SAMPLES COMPOSITED    M        1.00       1.00
             MAXIMUM DIVERSITY  MAXH         3.46       5.21
                TOTAL DIVERSITY     D     1657.60    3004.40
   TOTAL NUMBER OF INDIVIDUALS/ML   N      896.00    1036.00
              EVENESS COMPONENT     J        0.53       0.56
   MEAN NUMBER OF INDIVIDUALS/TAXA  L       81.45      28.00
 NUMBER/ML OF MOST ABUNDANT TAXON   K      474.00     303.00
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ATCHAFALAYA
STORET NUMBER: E001000 CONTINUED

TAXA	FORM	04 14 75			06 11 75		
		S	%C	ALGAL UNITS PER ML	S	%C	ALGAL UNITS PER ML
ACTINASTRUM HANTZSCHII	COL						
ANABAENA	FIL						
ANABAENA #1	FIL						X
ANABAENA #2	FIL						X
ANKISTRODESMUS	CEL						X
APHANOCAPSA	COL	5	5.9	53			
ASTERIONELLA FORMOSA	CEL						
CARTERIA	CEL						
CENTRIC DIATOM	CEL	3	17.6	158			
CENTRIC DIATOMS	CEL						
CHLAMYDOMONAS	CEL						
CLOSTERIUM	CEL						
COCCONEIS	CEL						
CRUCIGENIA FENESTRATA	COL						X
CRUCIGENIA TETRAPEDIA	COL						X
CRYPTOMONAS EROSA	CEL	2	17.6	158			
CRYPTOMONAS MARSSONII	CEL						
CRYPTOMONAS REFLEXA ?	CEL						X
CRYPTOMONAS SPP.	CEL						
CYANOPHYTAN FILAMENT	FIL	4	5.9	53			
CYCLOTELLA #1	CEL						X
CYCLOTELLA MENENGHINIANA	CEL						X
CYCLOTELLA SPP.	CEL				2	16.7	173
DACTYLOCOCCOPSIS	CEL						
DACTYLOCOCCOPSIS IRREGULARIS	CEL						
DINOBRYON	CEL						
DINOBRYON BAVARICUM	CEL						
DINOBRYON DIVERGENS	CEL						X
EUGLENA	CEL						
EUGLENA #1	CEL						X
EUGLENA ACUS	CEL						X
EUGLENA TRIPTERIS	CEL						X

ATCHAFALAYA
STORET NUMBER: E001000 CONTINUED

		04 14 75			06 11 75		
TAXA	FORM	S	%C	ALGAL UNITS PER ML	S	%C	ALGAL UNITS PER ML
FLAGELLATE	CEL						
FLAGELLATE #1	CEL	1	52.9	474			X
FLAGELLATE #3	CEL						
FLAGELLATES	CEL					8.3	86
GLENODINIUM OCULATUM	CEL						X
GYMNODINIUM ORDINATUM	CEL						
GYROSIGMA ?	CEL						
LEPOCINCLIS	CEL						
MELOSIRA	CEL						
MELOSIRA DISTANS	CEL			X		8.3	86
MELOSIRA GRANULATA	CEL						X
MELOSIRA GRANULATA V. ANGUSTISSIMA	CEL			X			
MELOSIRA GRANULATA V. ANGUSTISSIMA F. SPIRALIS	CEL						
MELOSIRA VARIANS	CEL			X			
MERISMOPEDIA PUNCTATA	CEL						
MERISMOPEDIA TENUISSIMA	COL						
MESOSTIGMA VIRIDIS	CEL						
NAVICULA	CEL						
NAVICULA #1	CEL						
NAVICULA #2	CEL						
NITZSCHIA ?	CEL						
NITZSCHIA #1	CEL						X
NITZSCHIA #2	CEL						X
NITZSCHIA #3	CEL						X
NITZSCHIA PALEA	CEL						
NITZSCHIA SPP.	CEL				4	8.3	86
OSCILLATORIA	FIL						
OSCILLATORIA #1	FIL						X
OSCILLATORIA #2	FIL				3	12.5	130
OSCILLATORIA LIMNETICA	FIL						

ATCHAFALAYA
STCRET NUMBER: E001000 CONTINUED

		04 14 75			06 11 75		
TAXA	FCRM	S	%C	ALGAL UNITS PER ML	S	%C	ALGAL UNITS PER ML
PANDORINA	COL						X
PENNATE	CEL						X
PHACUS	CEL						
PHACUS #1	CEL				5	8.3	86
PHACUS TORTUS	CEL						X
PTERCMCNAS ANGULCSA	CEL			X			
PTERCMCNAS CRUCIATA	CEL						
SCENEDESMUS INTERMEDIUS	COL						X
SCENEDESMLS PROTUBERANS ?	COL						X
SCENEDESMUS SPP.	COL					4.2	43
SCHROEDERIA SETIGERA	CEL			X		4.2	43
SKELETCNEMA POTAMOS	CEL				1	29.2	303
SYNEDRA	CEL			X			
SYNLRA UVELLA	CEL						
TETRAEDRCN MINIMUM	CEL						
TETRAEDRCN REGULARE V. GRANULATA	CEL						X
TETRAEDRCN TRIGONUM	CEL						
TRACHELCMCNAS	CEL						X
TRACHELCMCNAS INTERMEDIA	CEL						X
TRACHELCMONAS SCHAUINSLANDII	CEL						
TRACHELCMCNAS VCLVCCINA	CEL						
TRELBARIA	CEL						X
TCTAL				896			1036

ATCHAFALAYA
STORET NUMBER: E004000

NYGAARD TROPHIC STATE INDICES

DATE	11 19 74	04 17 75	06 11 75
MYXOPHYCEAN	6.00 E	02/0 E	04/0 E
CHLOROPHYCEAN	7.00 E	01/0 E	0/0 C
EUGLENOPHYTE	1.23 E	1.00 E	0.25 E
DIATOM	2.00 E	0/02 ?	0/01 ?
COMPOUND	33.0 E	06/0 E	05/0 E

PALMER'S ORGANIC POLLUTION INDICES

DATE	11 19 74	04 17 75	06 11 75
GENUS	07	05	00
SPECIES	03	00	00

SPECIES DIVERSITY AND ABUNDANCE INDICES

	DATE	11 19 74	04 17 75	06 11 75
AVERAGE DIVERSITY	H	2.64	2.07	0.95
NUMBER OF TAXA	S	40.00	10.00	7.00
NUMBER OF SAMPLES COMPOSITED	M	1.00	1.00	1.00
MAXIMUM DIVERSITY	MAXH	5.32	3.32	2.81
TOTAL DIVERSITY	D	1623.60	815.58	2852.85
TOTAL NUMBER OF INDIVIDUALS/ML	N	615.00	394.00	3003.00
EVENESS COMPONENT	J	0.50	0.62	0.34
MEAN NUMBER OF INDIVIDUALS/TAXA	L	15.38	39.40	429.00
NUMBER/ML OF MOST ABUNDANT TAXON	K	219.00	169.00	1914.00

ATCHAFALAYA
STORET NUMBER: EC04000 CONTINUEC

TAXA	FCRM	11 19 74 S	11 19 74 %C	11 19 74 ALGAL UNITS PER ML	04 17 75 S	04 17 75 %C	04 17 75 ALGAL UNITS PER ML	06 11 75 S	06 11 75 %C	06 11 75 ALGAL UNITS PER ML
ANKISTFCCESMUS ?	CEL									
ANKISTRCDESMUS FALCATUS	CEL						X			
ANKISTRODESMUS FALCATUS V. MIRABILIS	CEL	4	17.9	110						X
ARTHROSPIRA	FIL									
ASTERICNELLA FORMOSA	CEL									
CHLAMYCCMONAS GLCBCSA	CEL									
CHLOROPHYTAN CELL	CEL				4	21.6	85			
CHFCCMCNAS	CEL									
CHRYSOCCCCUS ? RUFESCENS	COL									
CLCSTERIUM #1	CEL			X						
COCCCNEIS PLACENTULA	CEL						X			
CRYPTOMCNAS EROSA	CEL									
CRYPTCMCNAS MARSSONII	CEL	1	35.6	219						
CRYPTOMCNAS REFLEXA	CEL	2	7.2	44						
CYANOPHYTAN COCCOID CELLED COLONY	COL			X				2	36.3	1089
CYANOPHYTAN FILAMENT	FIL									
CYCLOTELLA GLOMERATA	CEL									
CACTYLOCCCCOPSIS IRREGULARIS	CEL			X						
ELAKATCTHRIX GELATINCSA	CEL			X						
EUGLENA	CEL			X						
EUGLENA #1	CEL									
EUGLENA #2	CEL									
EUGLENA #3	CEL						X			
EUGLENA ACUS	CEL	5	3.6	22	3	7.1	28			
EUGLENA CXYURIS	CEL			X						
EUGLENA TRIPTERIS	CEL			X						
EUNCTIA CURVATA	CEL									
FLAGELLATE	CEL									
GLENODINIUM CCULATUM	CEL			X						
GYMNODINIUM ALBULUM	CEL									
GYRCSIGMA	CEL									

ATCHAFALAYA
STORET NUMBER: E004000 CONTINUED

TAXA	FORM	11 19 74 S	11 19 74 %C	11 19 74 ALGAL UNITS PER ML	04 17 75 S	04 17 75 %C	04 17 75 ALGAL UNITS PER ML	06 11 75 S	06 11 75 %C	06 11 75 ALGAL UNITS PER ML
LEPOCINCLIS ACUTA	CEL									
LEPOCINCLIS FUSIFORMIS	CEL			X						
LUNATE CELLED COLONY	COL				5	14.2	56	1	63.7	1914
MELOSIRA DISTANS	CEL			X						
MELOSIRA GRANULATA V. ANGUSTISSIMA	CEL									
MELOSIRA ITALICA	CEL			X						
MELOSIRA VARIANS	CEL									
MERISMOPEDIA TENUISSIMA	COL			X						X
NAVICULA #1	CEL									
NAVICULA #2	CEL						X			
NAVICULA RADIOSA	CEL									
NITZSCHIA	CEL			X						
NITZSCHIA #1	CEL									
OSCILLATORIA	FIL			X			X			
OSCILLATORIA #1	FIL			X						
OSCILLATORIA LIMNETICA	FIL		14.3	88	1	42.9	169			
PEDIASTRUM BIRADIATUM	COL			X						
PEDIASTRUM DUPLEX	COL			X						
PEDIASTRUM TETRAS	COL			X						
PHACUS CURVICAUDA	CEL			X						
PHACUS HELIKOIDES	CEL			X						
PHACUS LONGICAUDA	CEL			X						
PHACUS PYRUM	CEL			X						
PHACUS TRIMARGINATUS	CEL			X						
PHORMIDIUM	FIL									X
SCENEDESMUS DENTICULATUS	COL			X						
SCENEDESMUS DIMORPHUS	COL									
SCENEDESMUS QUADRICAUDA	COL									
SCHIZOCHLAMYS DELICATULA ?	CEL			X						
SKELETONEMA POTAMOS	CEL		7.2	44						
STEPHANODISCUS	CEL	3	7.2	44						

ATCHAFALAYA
STORET NUMBER: E004000 CONTINUEC

TAXA	FORM	11 19 74 S	11 19 74 %C	11 19 74 ALGAL UNITS PER ML	04 17 75 S	04 17 75 %C	04 17 75 ALGAL UNITS PER ML	06 11 75 S	06 11 75 %C	06 11 75 ALGAL UNITS PER ML
SYNEDRA	CEL			X						
SYNECRA ULNA	CEL									X
TABELLARIA FENESTRATA	CEL									
TETRASTRUM STAUROGENIAEFORME	COL		7.2	44						
TRACHELCMCNAS	CEL			X						
TRACHELOMONAS CORDATA ?	CEL			X						
TRACHELCMONAS CREBEA	CEL									
TRACHELCMONAS FLUVIATILIS	CEL			X						
TRACHELGMONAS INTERMEDIA	CEL									
TRACHELCMONAS LACUSTRIS	CEL			X						
TRACHELCMONAS PLANCTCNICA	CEL			X						
TRACHELCMONAS ROTUNCATA	CEL			X						
TRACHELCMCNAS VCLVCCINA	CEL				2	14.2	56			X
TOTAL				615			394			3003

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           ATCHAFALAYA
  STORET NUMBER: E004000      CONTINUED

                                              NYGAARD TROPHIC STATE INDICES

                                         DATE   12 19 75

                                    MYXOPHYCEAN    3.00 E
                                  CHLORCPHYCEAN    4.00 E
                                   EUGLENOPHYTE    1.14 E
                                         CIATCM    0.56 E
                                       COMPOUND    20.0 E

                                            PALMER'S CRGANIC POLLUTION INDICES

                                         DATE   12 19 75

                                          GENUS         10
                                        SPECIES         CO

                                           SPECIES DIVERSITY AND ABUNDANCE INDICES

                                         DATE   12 19 75

                      AVERAGE DIVERSITY    H       2.30
                         NUMBER OF TAXA    S      37.00
             NUMBER OF SAMPLES COMPOSITED  M       1.00
                     MAXIMUM DIVERSITY  MAXH       5.21
                        TOTAL DIVERSITY    D    5411.90
         TOTAL NUMBER OF INCIVICUALS/ML    N    2353.00
                      EVENESS COMPONENT    J       0.44
        MEAN NUMBER CF INDIVIDUALS/TAXA    L      63.59
       NUMBER/ML OF MOST ABUNDANT TAXCN    K    1313.00
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ATCHAFALAYA
STORET NUMBER: E004000 CONTINUED

TAXA	FORM	S	%C	12 19 75 ALGAL UNITS PER ML
ANKISTRODESMUS ?	CEL		1.3	31
ANKISTRODESMUS FALCATUS	CEL			
ANKISTRODESMUS FALCATUS V. MIRABILIS	CEL			
ARTHROSPIRA	FIL			
ASTERIONELLA FORMOSA	CEL			X
CHLAMYDOMONAS GLOBOSA	CEL	4	3.9	92
CHLOROPHYTAN CELL	CEL			
CHROOMONAS	CEL	2	13.0	305
CHRYSOCOCCUS ? RUFESCENS	COL			X
CLOSTERIUM #1	CEL			X
COCCONEIS PLACENTULA	CEL			
CRYPTOMONAS EROSA	CEL	1	55.8	1313
CRYPTOMONAS MARSSONII	CEL		2.6	61
CRYPTOMONAS REFLEXA	CEL			
CYANOPHYTAN COCCOID CELLED COLONY	COL			
CYANOPHYTAN FILAMENT	FIL			
CYCLOTELLA GLOMERATA	CEL	3	10.4	244
DACTYLOCOCCOPSIS IRREGULARIS	CEL		1.3	31
ELAKATOTHRIX GELATINOSA	CEL			X
EUGLENA	CEL			
EUGLENA #1	CEL			X
EUGLENA #2	CEL			X
EUGLENA #3	CEL			
EUGLENA ACUS	CEL			X
EUGLENA OXYURIS	CEL			
EUGLENA TRIPTERIS	CEL			
EUNOTIA CURVATA	CEL			X
FLAGELLATE	CEL			X
GLENODINIUM OCULATUM	CEL			
GYMNODINIUM ALBULUM	CEL		3.9	92
GYROSIGMA	CEL			X

ATCHAFALAYA
STORET NUMBER: E004000 CONTINUED

TAXA	FORM	S	%C	12 19 75 ALGAL UNITS PER ML
LEPOCINCLIS ACUTA	CEL			X
LEPOCINCLIS FUSIFORMIS	CEL			
LUNATE CELLED COLONY	COL			
MELOSIRA DISTANS	CEL			X
MELOSIRA GRANULATA V. ANGUSTISSIMA	CEL			X
MELOSIRA ITALICA	CEL			
MELOSIRA VARIANS	CEL			X
MERISMOPEDIA TENUISSIMA	COL			
NAVICULA #1	CEL		2.6	61
NAVICULA #2	CEL			
NAVICULA RADIOSA	CEL			X
NITZSCHIA	CEL			X
NITZSCHIA #1	CEL			X
OSCILLATORIA	FIL		1.3	31
OSCILLATORIA #1	FIL			X
OSCILLATORIA LIMNETICA	FIL			
PEDIASTRUM BIRADIATUM	COL			
PEDIASTRUM DUPLEX	COL			
PEDIASTRUM TETRAS	COL			
PHACUS CURVICAUDA	CEL			
PHACUS HELIKOIDES	CEL			
PHACUS LONGICAUDA	CEL			
PHACUS PYRUM	CEL			
PHACUS TRIMARGINATUS	CEL			
PHORMIDIUM	FIL			
SCENEDESMUS DENTICULATUS	COL			
SCENEDESMUS DIMORPHUS	COL			X
SCENEDESMUS QUADRICAUDA	COL		1.3	31
SCHIZOCHLAMYS DELICATULA ?	CEL			
SKELETONEMA POTAMOS	CEL			
STEPHANODISCUS	CEL			X

ATCHAFALAYA
STORET NUMBER: E004000 CONTINUED

TAXA	FORM	12 19 75 S	%C	ALGAL UNITS PER ML
SYNEDRA	CEL	5	2.6	61
SYNEDRA ULNA	CEL			X
TABELLARIA FENESTRATA	CEL			
TETRASTRUM STAUROGENIAEFORME	COL			
TRACHELOMONAS	CEL			
TRACHELOMONAS CORDATA ?	CEL			
TRACHELOMONAS CREBEA	CEL			X
TRACHELOMONAS FLUVIATILIS	CEL			
TRACHELOMONAS INTERMEDIA	CEL			X
TRACHELOMONAS LACUSTRIS	CEL			
TRACHELOMONAS PLANCTONICA	CEL			X
TRACHELOMONAS ROTUNCATA	CEL			
TRACHELOMONAS VOLVOCINA	CEL			X
TOTAL				2353

ATCHAFALAYA
STORET NUMBER: E008000

NYGAARD TROPHIC STATE INDICES

DATE	03 19 74	01 23 75	04 17 75
MYXOPHYCEAN	01/0 E	03/0 E	01/0 E
CHLOROPHYCEAN	0/0 O	07/0 E	06/0 E
EUGLENOPHYTE	0/01 ?	0/10 ?	0.43 E
DIATOM	4.00 E	0.67 E	2.00 E
COMPOUND	05/0 E	12/0 E	16/0 E

PALMER'S ORGANIC POLLUTION INDICES

DATE	03 19 74	01 23 75	04 17 75
GENUS	00	17	04
SPECIES	00	01	00

SPECIES DIVERSITY AND ABUNDANCE INDICES

	DATE	03 19 74	01 23 75	04 17 75
AVERAGE DIVERSITY	H	2.66	3.24	2.71
NUMBER OF TAXA	S	10.00	22.00	21.00
NUMBER OF SAMPLES COMPOSITED	M	1.00	1.00	1.00
MAXIMUM DIVERSITY	MAXH	3.32	4.46	4.39
TOTAL DIVERSITY	D	524.02	5508.00	11972.78
TOTAL NUMBER OF INDIVIDUALS/ML	N	197.00	1700.00	4418.00
EVENESS COMPONENT	J	0.80	0.73	0.62
MEAN NUMBER OF INDIVIDUALS/TAXA	L	19.70	77.27	210.38
NUMBER/ML OF MOST ABUNDANT TAXON	K	63.00	312.00	1562.00

ATCHAFALAYA
STORET NUMBER: E008000 CONTINUED

TAXA	FORM	03 19 74 S	03 19 74 %C	03 19 74 ALGAL UNITS PER ML	01 23 75 S	01 23 75 %C	01 23 75 ALGAL UNITS PER ML	04 17 75 S	04 17 75 %C	04 17 75 ALGAL UNITS PER ML
ACTINASTRUM	COL									
ANABAENA	FIL									
ANKISTRODESMUS ?	CEL								2.6	114
ANKISTRODESMUS FALCATUS	CEL									
ANKISTRODESMUS FALCATUS V. MIRABILIS	CEL						X			
APHANOCAPSA ELACHISTA	COL									
ASTERIONELLA FORMOSA	CEL									X
CARTERIA CORDIFORMIS	CEL						X			
CENTRIC DIATOM	CEL	4	10.7	21						
CHLAMYDOMONAS	CEL		2.0	4						
CHLAMYDOMONAS SPP.	CEL				5	10.2	173			
CHROOMONAS ACUTA	CEL				3	18.4	312			
CHROOMONAS NORSTEDTII ?	CEL					10.4	176			
COCCOID CELL	CEL	2	23.4	46						
COCCONEIS	CEL						X			
COCCONEIS PLACENTULA V. EUGLYPTA	CEL									
COELASTRUM CAMBRICUM V. INTERMEDIUM	COL						X			
CRUCIGENIA FENESTRATA	COL						X		0.9	38
CRYPTOMONAS	CEL	1	32.0	63						
CRYPTOMONAS EROSA	CEL				2	12.2	208		2.6	114
CRYPTOMONAS MARSSONII	CEL				1	14.3	243			
CYCLOTELLA MENENGHINIANA	CEL							1	35.4	1562
DACTYLOCOCCOPSIS	CEL					4.1	69			
DIATOMA	CEL						X			
DICTYOSPHAERIUM PULCHELLUM	COL									X
DINOBRYON DIVERGENS	CEL									
DINOFLAGELLATE	CEL									
EUGLENA	CEL								0.9	38
EUGLENA ACUS	CEL									

ATCHAFALAYA
STORET NUMBER: E008000 CONTINUED

TAXA	FORM	03 19 74 S	03 19 74 %C	03 19 74 ALGAL UNITS PER ML	01 23 75 S	01 23 75 %C	01 23 75 ALGAL UNITS PER ML	04 17 75 S	04 17 75 %C	04 17 75 ALGAL UNITS PER ML
EUGLENA CXYURIS										
V. MINCR	CEL									
EUNOTIA	CEL									X
FLAGELLATE #1	CEL							5	7.8	343
FLAGELLATE #2	CEL									
GLENODINIUM CCULATUM	CEL									
GLCEOCYSTIS	COL		2.0	4						
GYMNODINIUM ALBULUM	CEL						X			
LEPOCINCLIS	CEL									
MELCSIRA	CEL									
MELCSIRA CISTANS	CEL						X	4	12.1	533
MELOSIRA GRANULATA	CEL							2	19.0	838
MELOSIRA GRANULATA										
V. ANGLSTISSIMA	CEL	5	10.7	21			X	3	13.8	61C
MELCSIRA VARIANS	CEL		2.0	4						X
MERISMOPEDIA TENUISSIMA	COL								3.4	152
MICROCYSTIS INCERTA	COL				4	14.3	243			
NEPHROCYTIUM ?	COL									
NITZSCHIA	CEL									
NITZSCHIA ACICULARIS	CEL					4.1	69			
OSCILLATORIA	FIL		8.6	17		4.1	69			
OSCILLATORIA #1	FIL									
PENNATE	CEL								0.9	38
PHACUS	CEL									X
PHACLS LCNGICAUCA	CEL									
PHACUS ORBICULARIS	CEL									
PHACLS SUECICUS	CEL									
SCENEDESMUS ARCUATUS	CCL									X
SCENEDESMUS BIJUGA	COL					4.1	69			
SCENEDESMUS INTERMECIUS										
V. BICALCATUS	CCL									X
SCENEDESMUS QUADRICAUDA	COL						X			

ATCHAFALAYA
STORET NUMBER: EC08000 CONTINUED

TAXA	FORM	03 19 74			01 23 75			04 17 75		
		S	%C	ALGAL UNITS PER ML	S	%C	ALGAL UNITS PER ML	S	%C	ALGAL UNITS PER ML
SCHROEDERIA SETIGERA	CEL					4.1	69			
SKELETONEMA POTAMOS	CEL									X
SPHAEROCYSTIS	COL									X
STEPHANODISCUS NIAGARAE	CEL	3	8.6	17						
SYNEDRA	CEL			X						
TETRAEDRON TUMIDULUM	CEL						X			
TRACHELOMONAS	CEL								0.9	38
TRACHELOMONAS SPARSE-SETULOSA ?	CEL									
TRACHELOMONAS VOLVOCINA	CEL									
TOTAL				197			1700			4418

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                ATCHAFALAYA
        STORET NUMBER: E008000      CONTINUED

                                              NYGAARD TROPHIC STATE INDICES

                                        DATE    06 12 75

                                 MYXOPHYCEAN    04/0 E
                               CHLOROPHYCEAN    03/0 E
                                EUGLENOPHYTE    1.29 E
                                      DIATOM    0.33 E
                                    COMPOUND    17/0 E

                                             PALMER'S ORGANIC POLLUTION INDICES

                                        DATE    06 12 75

                                       GENUS          03
                                     SPECIES          00

                                             SPECIES DIVERSITY AND ABUNDANCE INDICES

                                        DATE    06 12 75

                    AVERAGE DIVERSITY    H        2.81
                       NUMBER OF TAXA    S       26.00
           NUMBER OF SAMPLES COMPOSITED  M        1.00
                   MAXIMUM DIVERSITY  MAXH        4.70
                      TOTAL DIVERSITY    D     4791.05
        TOTAL NUMBER OF INDIVIDUALS/ML   N     1705.00
                    EVENESS COMPONENT    J        0.60
        MEAN NUMBER OF INDIVIDUALS/TAXA  L       65.58
      NUMBER/ML OF MOST ABUNDANT TAXON   K      515.00
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ATCHAFALAYA
STCRET NUMBER: E008000 CONTINUED

		06 12 75		
TAXA	FORM	S	%C	ALGAL UNITS PER ML
ACTINASTRUM	COL		1.9	32
ANABAENA	FIL	2	5.7	97
ANKISTRCDESMUS ?	CEL			
ANKISTRCDESMUS FALCATUS	CEL		1.9	32
ANKISTRCDESMUS FALCATUS V. MIRABILIS	CEL			
APHANOCAPSA ELACHISTA	COL			X
ASTERIONELLA FORMOSA	CEL			X
CARTERIA CORDIFCRMIS	CEL			
CENTRIC DIATOM	CEL			
CHLAMYDOMCNAS	CEL			
CHLAMYDCMCNAS SPP.	CEL			
CHROOMCNAS ACUTA	CEL			
CHRCCMCNAS NORSTEDTII ?	CEL			
COCCOID CELL	CEL			
CCCCCNEIS	CEL			
COCCCNEIS PLACENTULA V. EUGLYPTA	CEL			X
CCELASTRUM CAMBRICUM V. INTERMEDIUM	COL			
CRUCIGENIA FENESTRATA	COL			
CRYPTOMCNAS	CEL	3	20.8	354
CRYPTOMCNAS EROSA	CEL			
CRYPTOMCNAS MARSSONII	CEL			
CYCLOTELLA MENEGHINIANA	CEL			
DACTYLOCCCCOPSIS	CEL			
DIATOMA	CEL			
DICTYOSPHAERIUM PULCHELLUM	CCL			
DINOBRYCN DIVERGENS	CEL			X
DINOFLAGELLATE	CEL		1.9	32
EUGLENA	CEL			X
EUGLENA ACUS	CEL			X

ATCHAFALAYA
STORET NUMBER: E008000 CONTINUED

TAXA	FORM	06 12 75 S	06 12 75 %C	06 12 75 ALGAL UNITS PER ML
EUGLENA OXYURIS V. MINOR	CEL			X
EUNOTIA	CEL			
FLAGELLATE #1	CEL		3.8	64
FLAGELLATE #2	CEL	4	30.2	515
GLENODINIUM OCULATUM	CEL			X
GLOEOCYSTIS	COL			
GYMNODINIUM ALBULUM	CEL			
LEPOCINCLIS	CEL			X
MELOSIRA	CEL			X
MELOSIRA DISTANS	CEL			
MELOSIRA GRANULATA	CEL			
MELOSIRA GRANULATA V. ANGUSTISSIMA	CEL			
MELOSIRA VARIANS	CEL			
MERISMOPEDIA TENUISSIMA	COL			
MICROCYSTIS INCERTA	COL			
NEPHROCYTIUM ?	COL		1.9	32
NITZSCHIA	CEL		7.6	129
NITZSCHIA ACICULARIS	CEL			
OSCILLATORIA	FIL			X
OSCILLATORIA #1	FIL			X
PENNATE	CEL			
PHACUS	CEL			
PHACUS LONGICAUDA	CEL	5	1.9	32
PHACUS ORBICULARIS	CEL			X
PHACUS SUECICUS	CEL			X
SCENEDESMUS ARCUATUS	COL			
SCENEDESMUS BIJUGA	COL			
SCENEDESMUS INTERMEDIUS V. BICALCATUS	COL			
SCENEDESMUS QUADRICAUDA	COL			

ATCHAFALAYA
STCRET NUMBER: E00800O CONTINUED

TAXA	FORM	S	%C	06 12 75 ALGAL UNITS PER ML
SCHRCEDERIA SETICERA	CEL			
SKELETCNEMA POTAMOS	CEL			
SPHAEROCYSTIS	COL			
STEPHANCDISCUS NIAGARAE	CEL			
SYNECRA	CEL			
TETRAECRCN TUMICULUM	CEL			
TRACHELOMONAS	CEL			
TRACHELCMONAS SPARSE-SETULOSA ?	CEL		1.9	32
TRACHELCMCNAS VCLVCCINA	CEL	1	20.8	354
TCTAL				1705

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            ATCHAFALAYA
     STORET NUMBER: E009000


                                              NYGAARD TROPHIC STATE INDICES

                                       DATE   11 19 74  12 18 75

                                MYXOPHYCEAN    02/0 E    02/0 E
                              CHLOROPHYCEAN    04/0 E    08/0 E
                               EUGLENOPHYTE    0.67 E    0.70 E
                                     DIATOM    4.00 E    0.71 E
                                   COMPOUND    14/0 E    22/0 E


                                             PALMER'S ORGANIC POLLUTION INDICES

                                       DATE   11 19 74  12 18 75

                                      GENUS         09        09
                                    SPECIES         00        04


                                           SPECIES DIVERSITY AND ABUNDANCE INDICES

                                       DATE   11 19 74  12 18 75

                  AVERAGE DIVERSITY    H          3.08      2.58
                     NUMBER OF TAXA    S         18.00     31.00
       NUMBER OF SAMPLES COMPOSITED    M          1.00      1.00
                  MAXIMUM DIVERSITY MAXH          4.17      4.95
                    TOTAL DIVERSITY    D       4339.72   9306.06
     TOTAL NUMBER OF INDIVIDUALS/ML    N       1409.00   3607.00
                  EVENESS COMPONENT    J          0.74      0.52
      MEAN NUMBER OF INDIVIDUALS/TAXA  L         78.28    116.35
     NUMBER/ML OF MOST ABUNDANT TAXON  K        392.00   1012.00
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ATCHAFALAYA
STORET NUMBER: E009000   CONTINUED

TAXA	FORM	11 19 74			12 18 75		
		S	%C	ALGAL UNITS PER ML	S	%C	ALGAL UNITS PER ML
ACTINASTRUM HANTZSCHII V. FLUVIATILE	CEL			X			
ANKISTRCDESMUS ?	CEL				1	25.4	917
CENTRIC DIATOM	CEL						X
CRLCIGENIA FENESTRATA	COL						X
CRLCIGENIA TETRAPEDIA	COL					1.7	63
CRYPTOMCNAS	CEL						X
CRYPTCMCNAS EROSA	CEL	1	11.1	157			
CYCLOTELLA MENENGHINIANA	CEL			X	3	26.3	949
CACTYLOCCCCOPSIS	CEL		2.8	39			
ELAKATCTHRIX GELATINCSA	CCL				4	2.6	95
EUGLENA #1	CEL		2.8	39			X
EUGLENA ACUS	CEL						X
EUGLENA ACUS ?	CEL			X			
FLAGELLATE #1	CEL	5	27.8	392			
GCPPHONEMA CLIVACEUM	CEL						X
LEPCCINCLIS	CEL			X			
LEPOCINCLIS FUSIFORMIS ?	CEL						X
MELCSIRA DISTANS	CEL		8.3	117			X
MELCSIRA GRANULATA	CEL			X			X
MERISMCPEDIA TENUISSIMA	COL					2.6	95
MCUGEOTIA	FIL						X
NAVICULA VULPINA	CEL						X
NITZSCHIA	CEL	2	8.3	117			X
NITZSCHIA #1	CEL					0.9	32
COCYSTIS	CEL			X			
OSCILLATCRIA	FIL		11.1	157			
OSCILLATORIA LIMNETICA	FIL						X
PHACUS ACUMINATUS	CEL						X
PTEROMONAS ANGULCSA	CEL	4	8.3	117			
SCENEDESMUS DIMORPHUS	COL					0.9	32
SCENEDESMUS INTERMEDIUS V. BICALCATUS	CCL					2.6	95

ATCHAFALAYA
STCRET NUMBER: E009000 CONTINUEC

		11 19 74			12 18 75		
TAXA	FORM	S	%C	ALGAL UNITS PER ML	S	%C	ALGAL UNITS PER ML
SCENEDESMUS QUADRICAUDA	COL			X		2.6	95
SCENEDESPUS RACIBORSKII							
F. GRANULATUS	COL		2.8	39			
SKELETCNEMA POTAMOS	CEL				5	5.3	190
STEPHANCCISCUS	CEL		2.8	39			
SURIRELLA	CEL						X
SURIRELLA LINEARIS ?	CEL						X
SYNECRA	CEL				2	28.1	1012
TETRAEDRON MINIMUM	CEL					0.9	32
TRACHELOMCNAS HISPICA	CEL						X
TRACHELCMCNAS SCHAUINSLANDII	CEL						X
TRACHELOMCNAS VERRUCCSA	CEL						X
TRACHELCMCNAS VOLVCCINA	CEL	3	13.9	196			
TCTAL				1409			3607

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                    ATCHAFALAYA
      STORET NUMBER: E011000

                                          NYGAARD TROPHIC STATE INDICES

                                DATE     11 19 74    01 23 75    06 21 75

                          MYXOPHYCEAN     01/0 E      03/0 E      04/0 E
                        CHLOROPHYCEAN     01/0 E      04/0 E      02/0 E
                         EUGLENOPHYTE     0.50 E      0.29 E      1.67 E
                               DIATOM     1.00 E      1.00 E      0.50 E
                             COMPOUND     05/0 E      14/0 E      17/0 E


                                         PALMER'S ORGANIC POLLUTION INDICES

                                DATE     11 19 74    01 23 75    06 21 75

                                GENUS          01          07          07
                              SPECIES          00          03          00


                                       SPECIES DIVERSITY AND ABUNDANCE INDICES

                                DATE     11 19 74    01 23 75    06 21 75

              AVERAGE DIVERSITY     H        1.52        3.28        2.28
                  NUMBER OF TAXA    S        7.00       28.00       23.00
    NUMBER OF SAMPLES COMPOSITED    M        1.00        1.00        1.00
               MAXIMUM DIVERSITY MAXH        2.81        4.81        4.52
                 TOTAL DIVERSITY    D      357.20     6540.32     3347.04
   TOTAL NUMBER OF INDIVIDUALS/ML   N      235.00     1994.00     1468.00
               EVENESS COMPONENT    J        0.54        0.68        0.50
  MEAN NUMBER OF INDIVIDUALS/TAXA   L       33.57       71.21       63.83
 NUMBER/ML OF MOST ABUNDANT TAXON   K       94.00      518.00      778.00
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ATCHAFALAYA CONTINUED
STORET NUMBER: E011000

TAXA	FORM	11 19 74			01 23 75			06 21 75		
		S	%C	ALGAL UNITS PER ML	S	%C	ALGAL UNITS PER ML	S	%C	ALGAL UNITS PER ML
ANABAENA	FIL									
ANABAENA #1	FIL									X
ANABAENA #2	FIL									X
ANKISTRODESMUS ?	CEL								2.0	30
ANKISTRODESMUS FALCATUS V. MIRABILIS	CEL				5	4.0	80		2.0	30
ASTERIONELLA FORMOSA	CEL			X						X
CARTERIA	CEL				4	8.0	159			
CHLAMYDOMONAS	CEL				1	16.0	319			
CLOSTERIUM	CEL									
COSCINODISCUS ROTHII V. SUBSALSA	CEL									
CRUCIGENIA FENESTRATA	COL						X			
CRYPTOMONAS	CEL							4	4.1	60
CRYPTOMONAS EROSA	CEL				3	10.0	199			
CRYPTOMONAS MARSSONII	CEL					4.0	80			
CYCLOTELLA	CEL						X			
CYMBELLA	CEL			X						
DACTYLOCOCCOPSIS	CEL					2.0	40			
DIATOMA VULGARE	CEL									
EUGLENA	CEL									X
EUGLENA #1	CEL						X			
EUGLENA ACUS	CEL									X
EUNOTIA	CEL					4.0	80			
FLAGELLATE	CEL							5	4.1	60
FLAGELLATE #2	CEL					6.0	120			
GLENODINIUM OCULATUM	CEL									X
GOMPHONEMA	CEL						X			
GYMNODINIUM	CEL									
GYMNODINIUM ALBULUM	CEL						X			
GYMNODINIUM ORDINATUM	CEL						X			
LEPOCINCLIS	CEL									X

ATCHAFALAYA
STORET NUMBER: E011000 CONTINUED

TAXA	FORM	11 19 74 S	11 19 74 %C	11 19 74 ALGAL UNITS PER ML	01 23 75 S	01 23 75 %C	01 23 75 ALGAL UNITS PER ML	06 21 75 S	06 21 75 %C	06 21 75 ALGAL UNITS PER ML
LUNATE CELLED COLONY	COL							2	53.0	778
LYNGBYA	FIL					4.0	80			
MELOSIRA	CEL									
MELOSIRA DISTANS	CEL						X			
MELOSIRA GRANULATA	CEL	1	40.0	94			X			X
MELOSIRA GRANULATA V. ANGUSTISSIMA	CEL						X			
MICROCYSTIS	COL					10.0	199			
NITZSCHIA	CEL									
NITZSCHIA #1	CEL					2.0	40			
NITZSCHIA FILIFORMIS	CEL						X			
OCHROMONAS	CEL				2	26.0	518			
OOCYSTIS	CEL									
OSCILLATORIA	FIL			X						X
OSCILLATORIA LIMNETICA	FIL							3	12.3	180
PENNATE	CEL								4.1	60
PHACUS #1	CEL								2.0	30
PHACUS ANOMALUS	CEL									X
PHACUS HELIKOIDES	CEL									X
PHACUS MEGALOPSIS	CEL									X
PHACUS SUECICUS	CEL									X
PTEROMONAS ANGULOSA	CEL					4.0	80			
SCENEDESMUS BICAUDATUS	COL									
SCENEDESMUS BIJUGA F. IRREGULARIS	COL						X			
SCENEDESMUS DIMORPHUS	COL			X						
SCENEDESMUS INTERMEDIUS V. BICAUDATUS	COL									
SCENEDESMUS PROTUBERANS	COL									
SCENEDESMUS QUADRICAUDA	COL									
SKELETONEMA POTAMOS	CEL						X			
SPHAEROCYSTIS ? SCHROETERI	COL									

ATCHAFALAYA
STCRET NLMBER: EG110CO CONTINUED

TAXA	FORM	11 19 74			01 23 75			06 21 75		
		S	%C	ALGAL UNITS PER ML	S	%C	ALGAL UNITS PER ML	S	%C	ALGAL UNITS PER ML
STEPHANCDISCUS	CEL	2	40.0	94						
SYNEDRA ULNA	CEL						X			
TETRAECRCN TRIGCNUM V. GPACILE	CEL						X			
TETRASTRUM STAUROGENIAEFORME	COL									
TRACHELOPCNAS	CEL	3	20.0	47						
TRACHELOMONAS HISPIDA	CEL								2.0	30
TRACHELCMCNAS INTERMEDIA	CEL						X			
TRACHELCMCNAS VOLVOCINA	CEL							1	14.3	210
TOTAL				235			1994			1468

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           ATCHAFALAYA
STORET NUMBER: E011000      CONTINUED

                                        NYGAARD TROPHIC STATE INDICES

                               DATE    12 15 75

                        MYXOPHYCEAN     3.00 E
                      CHLOROPHYCEAN     9.00 E
                       EUGLENOPHYTE     0.33 E
                             DIATOM     2.00 E
                           COMPOUND     22.0 E


                                       PALMER'S ORGANIC POLLUTION INDICES

                              DATE    12 15 75

                             GENUS         10
                           SPECIES         03


                                     SPECIES DIVERSITY AND ABUNDANCE INDICES

                              DATE    12 15 75

                AVERAGE DIVERSITY    H       3.19
                   NUMBER OF TAXA    S      28.00
       NUMBER OF SAMPLES COMPOSITED  M       1.00
                MAXIMUM DIVERSITY MAXH       4.81
                  TOTAL DIVERSITY    D    5314.54
    TOTAL NUMBER OF INDIVIDUALS/ML   N    1666.00
                EVENESS COMPONENT    J       0.66
   MEAN NUMBER OF INDIVIDUALS/TAXA   L      59.50
  NUMBER/ML OF MOST ABUNDANT TAXON   K     378.00
```

ATCHAFALAYA
STORET NUMBER: E011000 CONTINUED

		12 15 75		
TAXA	FORM	S	%C	ALGAL UNITS PER ML
ANABAENA	FIL			X
ANABAENA #1	FIL			
ANABAENA #2	FIL			
ANKISTRODESMUS ?	CEL			
ANKISTRODESMUS FALCATUS V. MIRABILIS	CEL	5	13.6	227
ASTERIONELLA FORMOSA	CEL		2.3	38
CARTERIA	CEL			
CHLAMYDOMONAS	CEL			X
CLOSTERIUM	CEL		2.3	38
COSCINODISCUS ROTHII V. SUBSALSA	CEL			X
CRUCIGENIA FENESTRATA	COL			
CRYPTOMONAS	CEL			
CRYPTOMONAS EROSA	CEL			
CRYPTOMONAS MARSSONII	CEL			
CYCLOTELLA	CEL			
CYMBELLA	CEL			
DACTYLOCOCCOPSIS	CEL			
DIATOMA VULGARE	CEL			X
EUGLENA	CEL			X
EUGLENA #1	CEL			
EUGLENA ACUS	CEL			X
EUNOTIA	CEL			
FLAGELLATE	CEL			
FLAGELLATE #2	CEL			
GLENODINIUM OCULATUM	CEL			
GOMPHONEMA	CEL			
GYMNODINIUM	CEL			X
GYMNODINIUM ALBULUM	CEL			
GYMNODINIUM ORDINATUM	CEL			
LEPOCINCLIS	CEL			

ATCHAFALAYA
STORET NUMBER: EG11000 CONTINUED

TAXA	FORM	12 15 75		
		S	%C	ALGAL UNITS PER ML
LUNATE CELLED COLONY	COL			
LYNGBYA	FIL			
MELOSIRA	CEL		4.6	76
MELOSIRA DISTANS	CEL	2	18.2	303
MELOSIRA GRANULATA	CEL		2.3	38
MELOSIRA GRANULATA V. ANGUSTISSIMA	CEL			
MICROCYSTIS	CCL			
NITZSCHIA	CEL	4	11.3	189
NITZSCHIA #1	CEL			
NITZSCHIA FILIFORMIS	CEL			
CHROOMONAS	CEL			
OOCYSTIS	CEL		4.6	76
OSCILLATORIA	FIL			X
OSCILLATORIA LIMNETICA	FIL			X
PENNATE	CEL			
PHACUS #1	CEL			
PHACUS ANOMALUS	CEL			
PHACUS HELIKOIDES	CEL			X
PHACUS MEGALOPSIS	CEL			
PHACUS SUECICUS	CEL			
PTEROMONAS ANGULOSA	CEL			
SCENEDESMUS BICAUDATUS	CCL			X
SCENEDESMUS BIJUGA F. IRREGULARIS	COL			
SCENEDESMUS DIMORPHUS	CCL			X
SCENEDESMUS INTERMEDIUS V. BICALCATUS	COL			X
SCENEDESMUS PROTUBERANS	CCL		2.3	38
SCENEDESMUS QUADRICAUDA	COL		2.3	38
SKELETONEMA POTAMOS	CEL	3	11.3	169
SPHAEROCYSTIS ? SCHROETERI	CCL			X

ATCHAFALAYA
STORET NUMBER: E011000 CONTINUED

TAXA	FORM	S	%C	12 15 75 ALGAL UNITS PER ML
STEPHANODISCUS	CEL	1	22.7	378
SYNEDRA ULNA	CEL			
TETRAEDRON TRIGONUM				
V. GRACILE	CEL			
TETRASTRUM STAUROGENIAEFORME	COL		2.3	38
TRACHELOMONAS	CEL			
TRACHELOMONAS HISPIDA	CEL			
TRACHELOMONAS INTERMEDIA	CEL			X
TRACHELOMONAS VOLVOCINA	CEL			
TOTAL				1666

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                         ATCHAFALAYA
                STORET NUMBER: E027000

                                    NYGAARD TROPHIC STATE INDICES

                          DATE    01 16 75   06 13 75   12 12 75

                   MYXOPHYCEAN    0/0  O     4.00 E     0/01 O
                CHLOROPHYCEAN    01/0 E     8.00 E     5.00 E
                 EUGLENOPHYTE    0/01 ?     0.42 E     1.40 E
                        DIATOM    0.80 E     0.71 E     1.50 E
                      COMPOUND    05/0 E     22.0 E     18.0 E


                                   PALMER'S ORGANIC POLLUTION INDICES

                          DATE    01 16 75   06 13 75   12 12 75

                         GENUS       04         05         13
                       SPECIES       00         00         03


                                   SPECIES DIVERSITY AND ABUNDANCE INDICES

                              DATE    01 16 75   06 13 75   12 12 75

             AVERAGE DIVERSITY    H       2.13       3.39       3.10
                NUMBER OF TAXA    S      12.00      33.00      28.00
  NUMBER OF SAMPLES COMPOSITED    M       1.00       1.00       1.00
             MAXIMUM DIVERSITY MAXH       3.58       5.04       4.81
               TOTAL DIVERSITY    C     553.80    5000.25   29834.40
  TOTAL NUMBER OF INDIVIDUALS/ML  N     260.00    1475.00    9624.00
             EVENESS COMPONENT    J       0.59       0.67       0.64
  MEAN NUMBER OF INDIVIDUALS/TAXA L      21.67      44.70     343.71
  NUMBER/ML OF MOST ABUNDANT TAXON K    104.00     241.00    2156.00
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ATCHAFALAYA
STORET NUMBER: E027000 CONTINUED

TAXA	FORM	01 16 75			06 13 75			12 12 75		
		S	%C	ALGAL UNITS PER ML	S	%C	ALGAL UNITS PER ML	S	%C	ALGAL UNITS PER ML
ACHNANTHES LANCEOLATA V. DUBIA	CEL						X			
ACTINASTRUM	COL						X			
ANABAENA	FIL						X			
ANKISTRODESMUS FALCATUS	CEL							5	17.5	1683
ANKISTRODESMUS FALCATUS V. MIRABILIS	CEL	5	10.0	26						
ASTERIONELLA	CEL						X			
ASTERIONELLA FORMOSA	CEL			X						
CENTRIC DIATOM	CEL						X	3	7.6	736
CHLAMYDOMONAS	CEL					2.3	34			
CLOSTERIUM	CEL				5	2.3	34			X
COELASTRUM MICROPORUM	COL						X			
COSCINODISCUS ROTHII V. SUBSALSA	CEL	1	40.0	104						
CRUCIGENIA QUADRATA	COL									X
CRUCIGENIA TETRAPEDIA	COL						X			
CRYPTOMONAS	CEL				2	14.0	206	1	18.0	1736
CRYPTOMONAS EROSA	CEL	4	10.0	26						
CYCLOTELLA	CEL			X						
CYCLOTELLA MENENGHINIANA	CEL									X
DACTYLOCOCCOPSIS	CEL						X			
EUGLENA	CEL						X		2.7	263
EUGLENA #2	CEL						X			
EUGLENA ACUS	CEL									X
EUGLENA OXYURIS	CEL									X
EUGLENA TRIPTERIS	CEL									X
EUNOTIA	CEL						X			
EUNOTIA CURVATA	CEL			X						
FLAGELLATE #1	CEL					11.7	172			
FLAGELLATES	CEL							4	22.4	2156
GOMPHONEMA OLIVACEUM	CEL			X						

ATCHAFALAYA
STORET NUMBER: E027000 CONTINUED

TAXA	FORM	01 16 75			06 13 75			12 12 75		
		S	%C	ALGAL UNITS PER ML	S	%C	ALGAL UNITS PER ML	S	%C	ALGAL UNITS PER ML
GYMNODINIUM ALBULUM	CEL			X						
KIRCHNERIELLA	CEL						X			
LEPOCINCLIS ACUTA	CEL									X
LYNGBYA	FIL					14.0	206			
MELOSIRA	CEL			X						X
MELOSIRA DISTANS	CEL	3	20.0	52		14.0	206		3.8	368
MELOSIRA GRANULATA	CEL				1	16.3	241			
MELOSIRA GRANULATA V. ANGUSTISSIMA	CEL								4.9	473
MELOSIRA VARIANS	CEL					2.3	34			
MERISMOPEDIA TENUISSIMA	COL					2.3	34			
MESOSTIGMA VIRIDIS	CEL								0.6	53
NAVICULA	CEL			X			X			
NITZSCHIA	CEL	2	20.0	52			X			
NITZSCHIA ACICULARIS	CEL									X
NITZSCHIA ACTINASTROIDES	CEL								1.1	105
NITZSCHIA HOLSATICA	CEL						X			
NITZSCHIA SPP.	CEL							2	14.8	1420
PENNATE	CEL								0.6	53
PHACUS CAUDATUS	CEL						X			
PHACUS LONGICAUDA	CEL									X
PHACUS PYRUM	CEL									X
SCENEDESMUS BICAUDATUS	COL					2.3	34			
SCENEDESMUS BIJUGA	COL						X			
SCENEDESMUS DIMORPHUS	COL					2.3	34			X
SCENEDESMUS QUADRICAUDA	COL					2.3	34			
SKELETONEMA POTAMOS	CEL								2.2	210
SPERMATOZOOPSIS	CEL								2.2	210
STAURONEIS	CEL						X			
STEPHANODISCUS	CEL				3	7.0	103			
SYNEDRA ACUS	CEL								0.6	53
TETRASTRUM STAUROGENIAEFORME	COL								1.1	105
TRACHELOMONAS PULCHERRIMA	CEL						X			
TRACHELOMONAS SPP.	CEL				4	7.0	103			
TREUBARIA	CEL									X
TOTAL				260			1475			9624

ATCHAFALAYA
STORET NUMBER: E028000

NYGAARD TROPHIC STATE INDICES

DATE	11 20 74	04 16 75	06 13 75
MYXOPHYCEAN	4.00 E	02/0 E	2.00 E
CHLOROPHYCEAN	12.0 E	01/0 E	3.00 E
EUGLENOPHYTE	0/16 ?	0.67 E	0.40 E
DIATOM	0.80 E	0.60 E	1.33 E
COMPOUND	20.0 E	08/0 E	11.0 E

PALMER'S ORGANIC POLLUTION INDICES

DATE	11 20 74	04 16 75	06 13 75
GENUS	11	00	00
SPECIES	04	00	00

SPECIES DIVERSITY AND ABUNDANCE INDICES

DATE		11 20 74	04 16 75	06 13 75
AVERAGE DIVERSITY	H	3.61	2.06	2.16
NUMBER OF TAXA	S	28.00	16.00	18.00
NUMBER OF SAMPLES COMPOSITED	M	1.00	1.00	1.00
MAXIMUM DIVERSITY	MAXH	4.81	4.00	4.17
TOTAL DIVERSITY	D	2613.64	1079.44	622.08
TOTAL NUMBER OF INDIVIDUALS/ML	N	724.00	524.00	288.00
EVENESS COMPONENT	J	0.75	0.52	0.52
MEAN NUMBER OF INDIVIDUALS/TAXA	L	25.86	32.75	16.00
NUMBER/ML OF MOST ABUNDANT TAXON	K	149.00	218.00	108.00

ATCHAFALAYA
STORET NUMBER: E028000 CONTINUED

TAXA	FORM	11 20 74 S	11 20 74 %C	11 20 74 ALGAL UNITS PER ML	04 16 75 S	04 16 75 %C	04 16 75 ALGAL UNITS PER ML	06 13 75 S	06 13 75 %C	06 13 75 ALGAL UNITS PER ML
ACTINASTRUM	CEL	5	3.5	25						X
ASTERIONELLA FORMOSA	CEL						X			
CHLORELLA	CEL		6.9	50						
CLOSTERIUM	CEL			X						X
COCCONEIS PLACENTULA	CEL									X
COELASTRUM MICROPORUM	COL	2	3.5	25						
CRYPTOMONAS EROSA	CEL	1	13.8	100						
CRYPTOMONAS MARSSONII	CEL									X
CRYPTOMONAS REFLEXA	CEL				4	8.4	44			X
CRYPTOMONAS SPP.	CEL							1	37.5	108
CYCLOTELLA	CEL			X						
DACTYLOCOCCOPSIS	CEL		3.5	25						X
DICTYOSPHAERIUM	COL	3	3.5	25						
EUGLENA #1	CEL							2	12.5	36
EUGLENA #2	CEL									X
FLAGELLATE #1	CEL			X						
GOMPHONEMA	CEL						X			X
HANTZSCHIA	CEL									X
KIRCHNERIELLA	CEL		3.5	25						
LYNGBYA	FIL		6.9	50						
MELOSIRA DISTANS	CEL		20.6	149			X			X
MELOSIRA GRANULATA	CEL			X						X
MELOSIRA GRANULATA V. ANGUSTISSIMA	CEL									X
MELOSIRA VARIANS	CEL						X			
NAVICULA #1	CEL		3.5	25						
NAVICULA #2	CEL		6.9	50						
NITZSCHIA	CEL			X						
OSCILLATORIA	FIL							5	12.5	36
OSCILLATORIA #1	FIL			X	3	8.4	44			
OSCILLATORIA #2	FIL			X						
OSCILLATORIA SPLENDIDA	FIL						X			

ATCHAFALAYA
STORET NUMBER: E028000 CONTINUED

TAXA	FORM	11 20 74 S	11 20 74 %C	11 20 74 ALGAL UNITS PER ML	04 16 75 S	04 16 75 %C	04 16 75 ALGAL UNITS PER ML	06 13 75 S	06 13 75 %C	06 13 75 ALGAL UNITS PER ML
PEDIASTRUM DUPLEX	COL			X						
PENNATE #1	CEL						X			
PENNATE #2	CEL						X			
PENNATE #3	CEL						X			
PENNATES	CEL				1	41.6	218			
PHACUS	CEL						X			
PHACUS MEGALOPSIS	CEL						X			
PLEUROSIGMA DELICATULUM	CEL			X						
PTEROMONAS ANGULOSA	CEL				5	16.6	87			
SCENEDESMUS	COL							4	12.5	36
SCENEDESMUS BIJUGA	COL		3.5	25						
SCENEDESMUS DIMORPHUS	COL		3.5	25						
SCENEDESMUS DIMORPHUS ?	COL									X
SCENEDESMUS PROTUBERANS	COL			X						
SCENEDESMUS QUADRICAUDA	COL		6.9	50						
SCHROEDERIA SETIGERA	CEL						X			
SKELETONEMA POTAMOS	CEL				2	25.0	131	3	25.0	72
STEPHANODISCUS	CEL			X						
SYNEDRA	CEL			X						
TETRAEDRON MINIMUM	CEL			X						
TETRASTRUM STAUROGENIAEFORME	COL	4	10.4	75						
TOTAL				724			524			288

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              ATCHAFALAYA
        STCRET NUMBER: EC30000

                                        NYGAARD TROPHIC STATE INDICES

                                 CATE    12 12 75

                            MYXOPHYCEAN    2.00 E
                          CHLCRCPHYCEAN    15.0 E
                           EUGLENOPHYTE    0.24 E
                                 CIATCM    1.50 E
                               COMPOUND    27.0 E


                                        PALMER'S ORGANIC POLLUTION INDICES

                                 DATE    12 12 75

                                 GENUS         06
                               SPECIES         00


                                        SPECIES DIVERSITY AND ABUNCANCE INDICES

                                 DATE    12 12 75

                     AVERAGE DIVERSITY    H        2.82
                        NUMBER OF TAXA    S       37.00
           NUMBER CF SAMPLES COMPOSITEC   M        1.00
                     MAXIMUM DIVERSITY MAXH        5.21
                       TOTAL DIVERSITY    D     5434.14
       TOTAL NUMBER OF INDIVICUALS/ML     N     1927.00
                    EVENESS COMPONENT     J        0.54
        MEAN NUMBER OF INCIVIDUALS/TAXA   L       52.08
      NUMBER/ML OF MOST ABUNDANT TAXCN    K      535.00
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ATCHAFALAYA
STORET NUMBER: E030000 CONTINUED

TAXA	FORM	12 12 75 S	%C	ALGAL UNITS PER ML
ACTINASTRUM	CEL			X
ANABAENA	FIL			X
ANKISTRODESMUS	CEL			X
ANKISTRODESMUS CONVOLUTUS ?	CEL			X
ANKISTRODESMUS FALCATUS V. MIRABILIS	CEL			X
ASTERIONELLA FORMOSA	CEL			X
CLOSTERIUM	CEL			X
CRYPTOMONAS EROSA	CEL			X
CRYPTOMONAS REFLEXA	CEL			X
CYCLOTELLA MENEGHINIANA	CEL	4	5.6	107
DICTYOSPHAERIUM	COL			X
EUGLENA #1	CEL			X
EUGLENA #2	CEL			X
FLAGELLATE #2	CEL			X
FLAGELLATE #3	CEL			X
FLAGELLATES	CEL	3	16.7	321
FRANCEIA DROESCHERI	CEL			X
KIRCHNERIELLA	CEL		5.6	107
MELOSIRA DISTANS	CEL	2	25.9	500
MELOSIRA GRANULATA	CEL		3.7	71
MELOSIRA GRANULATA V. ANGUSTISSIMA	CEL			X
MICRACTINIUM PUSILLUM	COL		1.9	36
NITZSCHIA	CEL			X
NITZSCHIA #4	CEL			X
OOCYSTIS	CEL			X
OSCILLATORIA	FIL			X
PENNATE	CEL		1.9	36
PHACUS CALCATUS	CEL			X
PHACUS MEGALOPSIS	CEL			X
SCENEDESMUS DIMORPHUS	COL		3.7	71

ATCHAFALAYA
STCPET NUMBER: EG30000 CONTINUED

TAXA	FORM	S	%C	12 12 75 ALGAL UNITS PER ML
SCENEDESMUS OVALTERNUS ?	COL			X
SCENEDESMLS QUADRICAUCA	COL			X
SKELETCNEMA POTAMOS	CEL	1	27.8	535
STEPHANCCISCUS	CEL		1.9	36
TETRASTRUM	COL	5	5.6	107
TETRASTRUM ELEGANS	COL			X
TETRASTRUM STAURCGENIAEFORME	COL			X
TOTAL				1927

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                 ATCHAFALAYA
    STCRET NUMBER: E031000

                                        NYGAARD TROPHIC STATE INDICES

                                 DATE   11 20 74   06 13 75

                          MYXCPHYCEAN    3.00 E     2.00 E
                        CHLORCPHYCEAN    3.00 C    11.0 E
                         EUGLENOPHYTE    0.17 ?     0.31 E
                               CIATCM    1.00 E     1.75 E
                             COMPOUND   10.0 E     24.0 E

                                        PALMER'S ORGANIC POLLUTION INDICES

                                 DATE   11 20 74   06 13 75

                                GENUS        00         01
                              SPECIES        00         00

                                        SPECIES CIVERSITY AND ABUNCANCE INDICES

                                 DATE   11 20 74   06 13 75

                   AVERAGE DIVERSITY    H     2.26       3.07
                      NUMBER OF TAXA    S    15.00      33.00
         NUMBER OF SAMPLES COMPOSITED   M     1.00       1.00
                   MAXIMUM DIVERSITY MAXH     3.91       5.04
                     TOTAL DIVERSITY    D   458.78    3073.07
      TOTAL NUMBER CF INDIVICUALS/ML    N   203.00    1001.00
                  EVENESS COMPONENT     J     0.58       0.61
      MEAN NUMBER CF INDIVIDUALS/TAXA   L    13.53      30.33
   NUMBER/ML OF MOST ABUNDANT TAXCA     K    67.00     250.00
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ATCHAFALAYA
STORET NUMBER: E031000 CONTINUED

TAXA	FORM	11 20 74			06 13 75		
		S	%C	ALGAL UNITS PER ML	S	%C	ALGAL UNITS PER ML
ACHNANTHES	CEL						X
ACTINASTRUM	CEL						X
ACTINASTRUM HANTZSCHII V. FLUVIATILE	CEL			X			
ANABAENA	FIL	2	16.7	34			
ANKISTRODESMUS	CEL						X
ANKISTRODESMUS FALCATUS V. MIRABILIS	CEL						X
ASTERIONELLA FORMOSA	CEL			X			
CENTRIC DIATOM	CEL			X			
CENTRIC DIATOMS	CEL				5	10.7	107
CHLOROPHYTAN FILAMENT	FIL					3.6	36
CHRYSOCOCCUS ?	CEL			X			
CLOSTERIUM	CEL					3.6	36
CLOSTERIUM ?	CEL			X			
COCCONEIS	CEL						X
COELASTRUM MICROPORUM	COL					3.6	36
COSCINODISCUS ROTHII V. SUBSALSA	COL						X
CRUCIGENIA CRUCIFERA	COL						X
CRUCIGENIA TETRAPECIA	COL						X
CRYPTOMONAS EROSA	CEL						X
CYANOPHYTAN FILAMENT	FIL						X
CYCLOTELLA MENEGHINIANA	CEL						X
DACTYLOCOCCOPSIS	CEL	3	33.0	67			
EUGLENA	CEL			X			X
EUGLENA TRIPTERIS	CEL						X
EUNOTIA	CEL						X
GOMPHONEMA	CEL						X
MELOSIRA	CEL			X			
MELOSIRA #1	CEL				1	25.0	250
MELOSIRA DISTANS	CEL			X	3	17.8	178

ATCHAFALAYA
STORET NUMBER: E031000 CONTINUED

TAXA	FORM	11 20 74 S	11 20 74 %C	11 20 74 ALGAL UNITS PER ML	06 13 75 S	06 13 75 %C	06 13 75 ALGAL UNITS PER ML
MELOSIRA GRANULATA							
V. ANGUSTISSIMA	CEL				4	10.7	107
OSCILLATORIA	FIL	1	16.7	34		3.6	36
PEDIASTRUM BIRADIATUM	COL						X
PEDIASTRUM DUPLEX							
V. CLATHRATUM	COL					3.6	36
PENNATE	CEL			X			
PENNATE #1	CEL	4	16.7	34			
PHACUS	CEL						X
SCENEDESMUS DENTICULATUS	COL						X
SCENEDESMUS DIMORPHUS	COL			X			X
SCENEDESMUS SPP.	COL					3.6	36
SCHROEDERIA SETIGERA	CEL	5	16.7	34			
SKELETONEMA POTAMOS	CEL				2	14.3	143
SPERMATOZOOPSIS	CEL						X
TETRASTRUM ELEGANS	COL						X
TRACHELOMONAS INTERMEDIA	CEL						X
TOTAL				203			1001

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                ATCHAFALAYA
   STORET NUMBER: E032000


                                   NYGAARD TROPHIC STATE INDICES

                         DATE   03 19 74   01 20 75   04 16 75

                  MYXOPHYCEAN    0/0  O     06/0 E     0.50 E
                 CHLOROPHYCEAN   0/0  O     03/0 E     1.50 E
                 EUGLENOPHYTE    0/0  ?     0/09 ?     0/04 ?
                       DIATOM    0/0  ?     0.83 E     1.20 E
                     COMPOUND    0/0  O     14/0 E     5.00 E


                                 PALMER'S ORGANIC POLLUTION INDICES

                         DATE   03 19 74   01 20 75   04 16 75

                        GENUS       00   .    12          07
                      SPECIES       00        04          02


                                 SPECIES DIVERSITY AND ABUNDANCE INDICES

                         DATE   03 19 74   01 20 75   04 16 75

              AVERAGE DIVERSITY    H     0.00       3.25       3.03
                 NUMBER OF TAXA    S     0.00      25.00      21.00
   NUMBER OF SAMPLES COMPOSITED    M     1.00       1.00       1.00
              MAXIMUM DIVERSITY MAXH     0.00       4.64       4.39
                TOTAL DIVERSITY    D     0.00    5508.50    2963.34
 TOTAL NUMBER OF INDIVIDUALS/ML    N     0.00    1818.00     978.00
             EVENESS COMPONENT     J     0.00       0.70       0.69
 MEAN NUMBER OF INDIVIDUALS/TAXA   L     0.00      72.72      46.57
NUMBER/ML OF MOST ABUNDANT TAXON   K     0.00     445.00     235.00
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ATCHAFALAYA
STORET NUMBER: EC32000 CONTINUED

TAXA	FORM	03 19 74 S	03 19 74 %C	03 19 74 ALGAL UNITS PER ML	01 20 75 S	01 20 75 %C	01 20 75 ALGAL UNITS PER ML	04 16 75 S	04 16 75 %C	04 16 75 ALGAL UNITS PER ML
ACHNANTHES	CEL									X
ACTINASTRUM	CEL									
ANABAENA	FIL									
ANKISTRODESMUS FALCATUS	CEL									
ANKISTRODESMUS FALCATUS V. MIRABILIS	CEL									X
ASTERIONELLA FORMOSA	CEL									X
ASTERIONELLA FORMOSA V. GRACILLIMA	CEL						X			
CARTERIA	CEL						X			
CENTRIC DIATOM	CEL									
CENTRIC DIATOMS	CEL				3	15.1	274		4.0	39
CHLAMYDOMONAS	CEL									
CHROOMONAS	CEL							4	24.0	235
CLOSTERIUM	CEL									
CLOSTERIUM #1	CEL									X
CLOSTERIUM #2	CEL									X
COCCOID CHLOROPHYTAN	CEL						X			
COELASTRUM MICROPORUM	COL									
COSCINODISCUS ROTHII V. SUBSALSA	CEL									X
CRUCIGENIA TETRAPEDIA	COL									
CRYPTOMONAS	CEL									
CRYPTOMONAS EROSA	CEL									X
CRYPTOMONAS MARSSONII	CEL				1	15.1	274			X
CRYPTOMONAS SPP.	CEL							1	12.0	117
CYANOPHYTAN FILAMENT	FIL						X			
CYCLOTELLA	CEL									
CYCLOTELLA MENEGHINIANA	CEL						X			X
CYMBELLA	CEL					3.8	69			
DACTYLOCOCCOPSIS	CEL					7.5	137			
DICTYOSPHAERIUM	COL									

ATCHAFALAYA
STCRET NUMBER: E032000 CONTINUED

TAXA	FORM	03 19 74			01 20 75			04 16 75		
		S	%C	ALGAL UNITS PER ML	S	%C	ALGAL UNITS PER ML	S	%C	ALGAL UNITS PER ML
ELAKATCTHRIX GELATINOSA	CCL									
EUGLENA #1	CEL									
EUGLENA CXYURIS	CEL									
EUGLENA SPP.	CEL									
EUGLENA TRIPTERIS	CEL									
FLAGELLATE #1	CEL									
FLAGELLATE #2	CEL				2	24.5	445			
FLAGELLATE #3	CEL									
FLAGELLATES	CEL									
FRAGILARIA CROTONENSIS	CEL									
GCMPHONEMA	CEL					1.9	34			X
GYMNODINIUM ALBULUM	CEL									
GYRCSIGMA	CEL									
LEPCCINCLIS SPP.	CEL									
LYNGBYA	FIL									
MALLCMCNAS	CEL									
MASTOGLOIA BRAUNII	CEL									
MELCSIRA #1	CEL									
MELCSIRA DISTANS	CEL				4	11.3	206	5	8.0	78
MELCSIRA GRANULATA	CEL									
MELCSIRA GRANULATA V. ANGUSTISSIMA	CEL						X			
MELCSIRA VARIANS	CEL							3	16.1	157
MICRCCYSTIS	COL					3.8	69			
MICROCYSTIS INCERTA	CCL						X			
NAVICULA	CEL								8.0	78
NITZSCHIA	CEL							2	16.1	157
NITZSCHIA #1	CEL						X			
NITZSCHIA #2	CEL						X			
NITZSCHIA ACICULARIS	CEL									
NITZSCHIA ANGUSTATA	CEL									
NITZSCHIA PALEA	CEL									

ATCHAFALAYA
STORET NUMBER: E032000 CONTINUED

TAXA	FORM	03 19 74 S	03 19 74 %C	03 19 74 ALGAL UNITS PER ML	01 20 75 S	01 20 75 %C	01 20 75 ALGAL UNITS PER ML	04 16 75 S	04 16 75 %C	04 16 75 ALGAL UNITS PER ML
NITZSCHIA REVERSA ?	CEL									
NITZSCHIA SPP.	CEL									
COCYSTIS CITRIFORMIS	CEL				5	3.8	69		4.0	39
OSCILLATORIA	FIL									
OSCILLATORIA SPLENDIDA	FIL									
PALMELLOID CHLAMYDOMONAS	CEL									
PEDIASTRUM TETRAS	COL									
PENNATE	CEL									
PENNATE #1	CEL									
PENNATE #2	CEL									
PHACUS MEGALOPSIS	CEL					3.8	69			
PHORMIDIUM	FIL									
PLANCTONEMA	FIL					1.9	34			
PTEROMONAS	CEL									
RAPHIDIOPSIS	FIL									
RIVULARIA	FIL									
SCENEDESMUS ABUNDANS	COL									
SCENEDESMUS BIJUGA	COL						X			
SCENEDESMUS DIMORPHUS	COL									
SCENEDESMUS DIMORPHUS ?	COL									
SCENEDESMUS INTERMEDIUS	COL									X
SCENEDESMUS PROTUBERANS	COL					3.8	69			
SCENEDESMUS QUADRICAUDA	COL					3.8	69			
SCHROEDERIA SETIGERA	CEL								4.0	39
SKELETONEMA POTAMOS	CEL									
STEPHANODISCUS	CEL						X			
STEPHANODISCUS ASTRAEA	CEL									
SURIRELLA LINEARIS	CEL						X			
SYNEDRA ULNA	CEL								4.0	39
TETRASTRUM STAUROGENIAEFORME	COL									
TRACHELOMONAS SPP.	CEL									
TOTAL				0			1818			978

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           ATCHAFALAYA
STCRET NUMBER: E032000       CONTINUED

                                     NYGAARD TROPHIC STATE INDICES

                              DATE   06 13 75   12 12 75   12 18 75

                       MYXOPHYCEAN   2.00 E     3.00 E     3.00 E
                     CHLOROPHYCEAN   5.00 E     9.00 E     8.00 E
                      EUGLENOPHYTE   0.14 ?     0.58 E     0.09 ?
                            DIATOM   2.00 E     0.36 E     1.20 E
                          COMPOUND   12.0 E     23.0 E     18.0 E


                                     PALMER'S CRGANIC POLLUTION INDICES

                              CATE   06 13 75   12 12 75   12 18 75

                             GENUS         03         14         10
                           SPECIES         03         09         00


                                     SPECIES DIVERSITY AND ABUNCANCE INCICES

                              DATE   06 13 75   12 12 75   12 18 75

             AVERAGE DIVERSITY   H       2.68       3.92       2.90
                NUMBER OF TAXA   S      16.00      42.00      28.00
   NUMBER OF SAMPLES COMPOSITED  M       1.00       1.00       1.00
             MAXIMUM DIVERSITY MAXH      4.00       5.39       4.81
               TOTAL DIVERSITY   C    2146.68   11466.00   11933.50
  TOTAL NUMBER OF INDIVIDUALS/ML N     801.00    2925.00    4115.00
             EVENESS COMPONENT   J       0.67       0.73       0.60
 MEAN NUMBER CF INDIVIDUALS/TAXA L      50.06      69.64     146.96
 NUMBER/ML OF MOST ABUNDANT TAXON K    229.00     630.00    1372.00
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ATCHAFALAYA
STORET NUMBER: E032000 CONTINUED

TAXA	FORM	06 13 75 S	06 13 75 %C	06 13 75 ALGAL UNITS PER ML	12 12 75 S	12 12 75 %C	12 12 75 ALGAL UNITS PER ML	12 18 75 S	12 18 75 %C	12 18 75 ALGAL UNITS PER ML
ACHNANTHES	CEL									
ACTINASTRUM	CEL			X						X
ANABAENA	FIL			X			X			
ANKISTRODESMUS FALCATUS	CEL	4	17.9	143		1.2	34			
ANKISTRODESMUS FALCATUS V. MIRABILIS	CEL									X
ASTERIONELLA FORMOSA	CEL						X			X
ASTERIONELLA FORMOSA V. GRACILLIMA	CEL									
CARTERIA	CEL									
CENTRIC DIATOM	CEL	2	14.2	114						
CENTRIC DIATOMS	CEL									
CHLAMYDOMONAS	CEL						X	1	33.3	1372
CHROOMONAS	CEL									
CLOSTERIUM	CEL			X			X		1.1	46
CLOSTERIUM #1	CEL									
CLOSTERIUM #2	CEL									
COCCOID CHLOROPHYTAN	CEL									
COELASTRUM MICROPORUM	COL			X						
COSCINODISCUS ROTHII V. SUBSALSA	CEL									
CRUCIGENIA TETRAPEDIA	COL									X
CRYPTOMONAS	CEL							4	3.3	137
CRYPTOMONAS EROSA	CEL						X			
CRYPTOMONAS MARSSONII	CEL									
CRYPTOMONAS SPP.	CEL					6.4	187			
CYANOPHYTAN FILAMENT	FIL									X
CYCLOTELLA	CEL								10.0	412
CYCLOTELLA MENENGHINIANA	CEL									
CYMBELLA	CEL									
DACTYLOCOCCOPSIS	CEL									
DICTYOSPHAERIUM	COL					1.2	34			X

ATCHAFALAYA
STORET NUMBER: E032000 CONTINUED

TAXA	FORM	06 13 75 S	06 13 75 %C	06 13 75 ALGAL UNITS PER ML	12 12 75 S	12 12 75 %C	12 12 75 ALGAL UNITS PER ML	12 18 75 S	12 18 75 %C	12 18 75 ALGAL UNITS PER ML
ELAKATOTHRIX GELATINOSA	COL					1.2	34			
EUGLENA #1	CEL									X
EUGLENA OXYURIS	CEL						X			
EUGLENA SPP.	CEL				3	4.1	119			
EUGLENA TRIPTERIS	CEL			X						
FLAGELLATE #1	CEL						X			
FLAGELLATE #2	CEL								4.4	183
FLAGELLATE #3	CEL						X			
FLAGELLATES	CEL	5	14.2	114						
FRAGILARIA CROTONENSIS	CEL						X			
GOMPHONEMA	CEL						X			
GYMNODINIUM ALBULUM	CEL					1.7	51			
GYROSIGMA	CEL						X			
LEPOCINCLIS SPP.	CEL					2.3	68			
LYNGBYA	FIL						X			X
MALLOMONAS	CEL						X			
MASTOGLOIA BRAUNII	CEL									X
MELOSIRA #1	CEL	1	28.6	229						
MELOSIRA DISTANS	CEL			X	1	21.5	630	2	24.4	1006
MELOSIRA GRANULATA	CEL				2	7.0	204	3	6.7	274
MELOSIRA GRANULATA V. ANGUSTISSIMA	CEL									
MELOSIRA VARIANS	CEL									
MICROCYSTIS	COL									
MICROCYSTIS INCERTA	COL									
NAVICULA	CEL						X			
NITZSCHIA	CEL									
NITZSCHIA #1	CEL									X
NITZSCHIA #2	CEL								1.1	46
NITZSCHIA ACICULARIS	CEL						X			
NITZSCHIA ANGUSTATA	CEL						X			
NITZSCHIA PALEA	CEL					3.5	102			

ATCHAFALAYA
STORET NUMBER: E032000 CONTINUED

TAXA	FORM	06 13 75			12 12 75			12 18 75		
		S	%C	ALGAL UNITS PER ML	S	%C	ALGAL UNITS PER ML	S	%C	ALGAL UNITS PER ML
NITZSCHIA REVERSA ?	CEL				4	9.3	272			
NITZSCHIA SPP.	CEL					7.6	221			
OOCYSTIS CITRIFORMIS	CEL						X			
OSCILLATORIA	FIL									
OSCILLATORIA SPLENDIDA	FIL			X						
PALMELLOID CHLAMYDOMONAS	CEL									X
PEDIASTRUM TETRAS	COL		3.6	29						
PENNATE	CEL					7.0	204			
PENNATE #1	CEL		3.6	29						
PENNATE #2	CEL		3.6	29						
PHACUS MEGALOPSIS	CEL						X			
PHORMIDIUM	FIL									
PLANCTONEMA	FIL					1.2	34			
PTEROMONAS	CEL									
RAPHIDIOPSIS	FIL					4.1	119			
RIVULARIA	FIL									X
SCENEDESMUS ABUNDANS	COL							5	3.3	137
SCENEDESMUS BIJUGA	COL						X			
SCENEDESMUS DIMORPHUS	COL			X		2.3	68			
SCENEDESMUS DIMORPHUS ?	COL									X
SCENEDESMUS INTERMEDIUS	COL						X			
SCENEDESMUS PROTUBERANS	COL									
SCENEDESMUS QUADRICAUDA	COL				5	4.1	119			
SCHROEDERIA SETIGERA	CEL								3.3	137
SKELETONEMA POTAMOS	CEL	3	14.2	114		8.1	238		4.4	183
STEPHANODISCUS	CEL					2.9	85		2.2	91
STEPHANODISCUS ASTRAEA	CEL									X
SURIRELLA LINEARIS	CEL									X
SYNEDRA ULNA	CEL					0.6	17			
TETRASTRUM STAUROGENIAEFORME	COL					1.2	34		2.2	91
TRACHELOMONAS SPP.	CEL					1.7	51			
TOTAL				801			2925			4115

ATCHAFALAYA
STORET NUMBER: EC52000

NYGAARD TROPHIC STATE INDICES

DATE	11 21 74	01 20 75	12 15 75
MYXOPHYCEAN	01/0 E	04/0 E	03/0 E
CHLOROPHYCEAN	01/0 E	03/0 E	04/0 E
EUGLENOPHYTE	2.50 E	0.14 ?	0.14 ?
DIATOM	1.00 E	0.71 E	0.58 E
COMPOUND	09/0 E	13/0 E	15/0 E

PALMER'S ORGANIC POLLUTION INDICES

DATE	11 21 74	01 20 75	12 15 75
GENUS	05	00	08
SPECIES	00	00	00

SPECIES DIVERSITY AND ABUNDANCE INDICES

	DATE	11 21 74	01 20 75	12 15 75
AVERAGE DIVERSITY	H	1.36	1.94	3.41
NUMBER OF TAXA	S	14.00	22.00	38.00
NUMBER OF SAMPLES COMPOSITED	M	1.00	1.00	1.00
MAXIMUM DIVERSITY	MAXH	3.81	4.46	5.25
TOTAL DIVERSITY	D	497.76	211.46	5953.86
TOTAL NUMBER OF INDIVIDUALS/ML	N	366.00	109.00	1746.00
EVENESS COMPONENT	J	0.36	0.43	0.65
MEAN NUMBER OF INDIVIDUALS/TAXA	L	26.14	4.95	45.95
NUMBER/ML OF MOST ABUNDANT TAXON	K	203.00	43.00	295.00

ATCHAFALAYA
STORET NUMBER: EC52000 CONTINUED

TAXA	FORM	11 21 74			01 20 75			12 15 75		
		S	%C	ALGAL UNITS PER ML	S	%C	ALGAL UNITS PER ML	S	%C	ALGAL UNITS PER ML
ACHNANTHES	CEL									X
ANABAENA	FIL									X
ANKISTRODESMUS FALCATUS V. MIRABILIS	CEL			X	3	20.2	22			X
ASTERIONELLA FORMOSA	CEL						X			
ASTERIONELLA FORMOSA V. GRACILLIMA	CEL									X
CARTERIA	CEL									X
CENTRIC DIATOMS	CEL							5	10.8	188
CHLAMYDOMONAS	CEL									X
CHROOMONAS #1	CEL							2	16.9	295
CHROOMONAS NORDSTEDTII	CEL								9.2	161
COCCONEIS	CEL						X			X
COSCINODISCUS ROTHII V. SUBSALSA	CEL									X
CRUCIGENIA APICULATA	COL									X
CRYPTOMONAS EROSA	CEL									X
CRYPTOMONAS MARSSONII	CEL	1	33.3	122			X		3.1	54
CRYPTOMONAS REFLEXA	CEL						X			
CYANOPHYTAN FILAMENT	FIL								1.5	27
CYCLOTELLA MENEGHINIANA	CEL									X
CYCLOTELLA MICHIGANIANA	CEL						X			
DACTYLOCOCCOPSIS	CEL								3.1	54
EUGLENA	CEL									X
EUGLENA #1	CEL			X						
EUGLENA ACUS	CEL			X						
EUGLENA GRACILIS	CEL			X						
EUGLENOID CYST	CEL			X						
EUNOTIA CURVATA	CEL						X			
FLAGELLATE	CEL								10.8	188
GOMPHONEMA	CEL									X
MALLOMONAS ALPINA	CEL			X						

ATCHAFALAYA
STORET NUMBER: E052000 CONTINUED

TAXA	FORM	11 21 74			01 20 75			12 15 75		
		S	%C	ALGAL UNITS PER ML	S	%C	ALGAL UNITS PER ML	S	%C	ALGAL UNITS PER ML
MELOSIRA	CEL			X						
MELOSIRA DISTANS	CEL			X			X		3.1	54
MELOSIRA GRANULATA	CEL						X			
MELOSIRA GRANULATA V. ANGUSTISSIMA	CEL							4	7.7	134
MELOSIRA VARIANS	CEL				1	39.4	43			
MESOSTIGMA VIRIDIS	CEL									X
MICROCYSTIS INCERTA	COL						X			
NAVICULA	CEL						X			X
NAVICULA #1	CEL			X						
NAVICULA #2	CEL	3	11.2	41						
NITZSCHIA #1	CEL				2	20.2	22			X
NITZSCHIA #2	CEL									X
NITZSCHIA #3	CEL									X
NITZSCHIA ACICULARIS	CEL									X
NITZSCHIA PARADOXA	CEL									X
NITZSCHIA SIGMOIDEA	CEL									X
NITZSCHIA SPP.	CEL							1	16.9	295
OSCILLATORIA	FIL						X			
OSCILLATORIA AMPHIBIA	FIL						X			
OSCILLATORIA LIMNETICA	FIL	2	55.5	203	4	20.2	22			
PANDORINA MORUM	COL								1.5	27
PEDIASTRUM DUPLEX	COL									X
PHACUS PLEURONECTES	CEL			X						
PLEUROSIGMA	CEL									X
PTEROMONAS ANGULOSA	CEL								1.5	27
PYRROPHYTAN CYST	CEL			X						
SCENEDESMUS BIJUGA	COL						X			
SCENEDESMUS DIMORPHUS	COL						X			
SCENEDESMUS DIMORPHUS ?	COL								3.1	54
SKELETONEMA POTAMOS	CEL							3	10.8	188
STEPHANODISCUS	CEL						X			

ATCHAFALAYA
STORET NUMBER: E052000 CONTINUED

TAXA	FORM	11 21 74			01 20 75			12 15 75		
		S	%C	ALGAL UNITS PER ML	S	%C	ALGAL UNITS PER ML	S	%C	ALGAL UNITS PER ML
STEPHANODISCUS NIAGARAE	CEL									X
SURIRELLA OVATA	CEL						X			
SYNEDRA ULNA	CEL						X			
TRACHELOMONAS VOLVOCINA	CEL						X			
TOTAL				366			109			1746

ATCHAFALAYA
STORET NUMBER: E059000

NYGAARD TROPHIC STATE INDICES

DATE	11 22 74	12 11 74	01 18 75
MYXOPHYCEAN	03/0 E	2.00 E	01/0 E
CHLOROPHYCEAN	02/0 E	5.00 E	02/0 E
EUGLENOPHYTE	0/05 ?	0/07 ?	0/03 ?
DIATOM	1.00 E	0.57 E	1.00 E
COMPOUND	09/0 E	11.0 E	07/0 E

PALMER'S ORGANIC POLLUTION INDICES

DATE	11 22 74	12 11 74	01 18 75
GENUS	08	06	00
SPECIES	00	04	00

SPECIES DIVERSITY AND ABUNDANCE INDICES

	DATE	11 22 74	12 11 74	01 18 75
AVERAGE DIVERSITY	H	2.50	3.07	0.87
NUMBER OF TAXA	S	14.00	22.00	15.00
NUMBER OF SAMPLES COMPOSITED	M	1.00	1.00	1.00
MAXIMUM DIVERSITY	MAXH	3.81	4.46	3.91
TOTAL DIVERSITY	D	880.00	3039.30	417.60
TOTAL NUMBER OF INDIVIDUALS/ML	N	352.00	990.00	480.00
EVENESS COMPONENT	J	0.66	0.69	0.22
MEAN NUMBER OF INDIVIDUALS/TAXA	L	25.14	45.00	32.00
NUMBER/ML OF MOST ABUNDANT TAXON	K	88.00	198.00	352.00

ATCHAFALAYA
STORET NUMBER: E0590C0 CONTINUED

TAXA	FORM	11 22 74			12 11 74			01 18 75		
		S	%C	ALGAL UNITS PER ML	S	%C	ALGAL UNITS PER ML	S	%C	ALGAL UNITS PER ML
ACTINASTRUM HANTZSCHII V. FLUVIATILE	CEL						X			
ANABAENA	FIL									X
ANKISTRODESMUS ? SPIRALIS	CEL									
ANKISTRODESMUS FALCATUS V. MIRABILIS	CEL									
APHANIZOMENON FLOS-AQUAE	FIL						X			
ASTERIONELLA FORMOSA	CEL						X			X
CENTRIC DIATOMS	CEL									
CLOSTERIUM	CEL						X			
COCCOID CELL	CEL									
COCCONEIS	CEL			X						
COCCONEIS PLACENTULA	CEL									
COELASTRUM	COL									X
COELASTRUM MICROPORUM	COL									
COELASTRUM SPHAERICUM	COL						X			
CRYPTOMONAS	CEL									
CRYPTOMONAS EROSA	CEL				1	13.3	132			X
CRYPTOMONAS MARSSONII	CEL			X						
CRYPTOMONAS REFLEXA	CEL									X
CRYPTOMONAS SPP.	CEL							1	81.7	392
CYANOPHYTAN FILAMENT	FIL									
CYCLOTELLA	CEL			X	5	16.7	165			
CYCLOTELLA MENENGHINIANA	CEL			X						X
CYMBELLA	CEL					3.3	33			
DACTYLOCOCCOPSIS	CEL					6.7	66			
EUGLENA TRIPTERIS	CEL									
FLAGELLATE #1	CEL				4	13.3	132			
FLAGELLATE #2	CEL									
FLAGELLATE #3	CEL						X			
GOMPHONEMA	CEL									X
GOMPHONEMA ANGUSTATUM	CEL									

ATCHAFALAYA
STORET NUMBER: EC59000 CONTINUED

TAXA	FORM	11 22 74			12 11 74			01 18 75		
		S	%C	ALGAL UNITS PER ML	S	%C	ALGAL UNITS PER ML	S	%C	ALGAL UNITS PER ML
GOMPHONEMA ANGUSTATUM V. PRODUCTA	CEL									
GOMPHONEMA PARVULUM	CEL						X			
GOMPHONEMA SPP.	CEL									
GYROSIGMA KUTZINGII	CEL						X			
GYROSIGMA SCALPROIDES	CEL						X			
HANTZSCHIA AMPHIOXYS	CEL			X						
KIRCHNERIELLA	CEL					3.3	33			
MALLOMONAS	CEL									
MELOSIRA #1	CEL									X
MELOSIRA DISTANS	CEL					13.3	132			X
MELOSIRA GRANULATA	CEL			X						
MELOSIRA GRANULATA V. ANGUSTISSIMA	CEL									
MELOSIRA ISLANDICA	CEL				2	20.0	198			
MELOSIRA VARIANS	CEL									X
NAVICULA	CEL									X
NITZSCHIA	CEL					3.3	33	3	9.2	44
NITZSCHIA #1	CEL		12.5	44						
NITZSCHIA #2	CEL	5	12.5	44						
NITZSCHIA FILIFORMIS	CEL									
OOCYSTIS BORGEI	CEL			X						
OSCILLATORIA	FIL									
OSCILLATORIA #1	FIL			X						
OSCILLATORIA #2	FIL	3	25.0	88						
PEDIASTRUM BIRADIATUM	COL									
PHACUS LONGICAUDA	CEL									
PTEROMONAS ANGULOSA	CEL									X
RAPHIDIOPSIS	FIL	2	25.0	88						
SCENEDESMUS BICAUDATUS	COL									
SCENEDESMUS BIJUGA	COL	1	12.5	44						
SCENEDESMUS DIMORPHUS	COL									

ATCHAFALAYA
STCRET NUMBER: EC59000 CONTINUEC

TAXA	FORM	11 22 74			12 11 74			01 18 75		
		S	%C	ALGAL UNITS PER ML	S	%C	ALGAL UNITS PER ML	S	%C	ALGAL UNITS PER ML
SCENEDESMUS PROTUBERANS	COL							2	9.2	44
SCENEDESMUS QUACRICAUDA	COL				3	6.7	66			
SKELETCNEMA POTAMOS	CEL									
STEPHANCDISCUS	CEL	4	12.5	44						
STEPHANCDISCUS ASTRAEA	CEL						X			
SYNECRA ULNA	CEL						X			
TETRASTRUM STAURCGENIAEFORME	COL						X			
TRACHELCMCNAS INTERMEDIA	CEL									
ICTAL				352			990			480

ATCHAFALAYA
STORET NUMBER: E059000 CONTINUED

NYGAARD TRCPHIC STATE INCICES

DATE	04 15 75	06 14 75
MYXCPHYCEAN	03/0 E	01/0 E
CHLOROPHYCEAN	05/0 E	05/0 E
EUGLENCPHYTE	0/08 ?	0.50 E
DIATCM	0.62 E	07/0 E
COMPOUND	13/0 E	16/0 E

PALMER'S ORGANIC POLLUTION INDICES

DATE	04 15 75	06 14 75
GENLS	13	05
SPECIES	00	00

SPECIES DIVERSITY AND ABUNCANCE INCICES

	DATE	04 15 75	06 14 75
AVERAGE DIVERSITY	H	3.37	2.30
NUMBER OF TAXA	S	26.00	18.00
NUMBER OF SAMPLES COMPOSITED	M	1.00	1.00
MAXIMUM DIVERSITY	MAXH	4.70	4.17
TOTAL DIVERSITY	D	4549.50	811.90
TOTAL NUMBER OF INDIVIDUALS/ML	N	1350.00	353.00
EVENESS COMPONENT	J	0.72	0.55
MEAN NUMBER OF INDIVIDUALS/TAXA	L	51.92	19.61
NUMBER/ML OF MOST ABUNDANT TAXON	K	300.00	97.00

ATCHAFALAYA
STORET NUMBER: E059000 CONTINUED

TAXA	FORM	04 15 75			06 14 75		
		S	%C	ALGAL UNITS PER ML	S	%C	ALGAL UNITS PER ML
ACTINASTRUM HANTZSCHII							
V. FLUVIATILE	CEL						
ANABAENA	FIL						
ANKISTRODESMUS ? SPIRALIS	CEL						X
ANKISTRODESMUS FALCATUS							
V. MIRABILIS	CEL		2.2	30			
APHANIZOMENON FLOS-AQUAE	FIL						
ASTERIONELLA FORMOSA	CEL						
CENTRIC DIATOMS	CEL				2	18.1	64
CLOSTERIUM	CEL						
COCCOID CELL	CEL			X			
COCCONEIS	CEL			X			
COCCONEIS PLACENTULA	CEL		4.4	60			
COELASTRUM	COL						
COELASTRUM MICROPORUM	COL				3	18.1	64
COELASTRUM SPHAERICUM	COL						
CRYPTOMONAS	CEL	3	8.9	120	4	18.1	64
CRYPTOMONAS EROSA	CEL						
CRYPTOMONAS MARSSONII	CEL						
CRYPTOMONAS REFLEXA	CEL						
CRYPTOMONAS SPP.	CEL						
CYANOPHYTAN FILAMENT	FIL		4.4	60			
CYCLOTELLA	CEL						
CYCLOTELLA MENENGHINIANA	CEL			X			X
CYMBELLA	CEL			X			
DACTYLOCOCCOPSIS	CEL		6.7	90			
EUGLENA TRIPTERIS	CEL						X
FLAGELLATE #1	CEL						X
FLAGELLATE #2	CEL	1	22.2	300			
FLAGELLATE #3	CEL						
GOMPHONEMA	CEL						
GOMPHONEMA ANGUSTATUM	CEL			X			

ATCHAFALAYA
STORET NUMBER: E059000 CONTINUED

TAXA	FORM	04 15 75 S	04 15 75 %C	04 15 75 ALGAL UNITS PER ML	06 14 75 S	06 14 75 %C	06 14 75 ALGAL UNITS PER ML
GOMPHONEMA ANGUSTATUM V. PRODUCTA	CEL			X			
GOMPHONEMA PARVULUM	CEL						
GOMPHONEMA SPP.	CEL	4	17.8	240			
GYROSIGMA KUTZINGII	CEL						
GYROSIGMA SCALPROIDES	CEL						
HANTZSCHIA AMPHIOXYS	CEL						
KIRCHNERIELLA	CEL			X			
MALLOMONAS	CEL			X			
MELOSIRA #1	CEL						
MELOSIRA DISTANS	CEL		8.9	120			X
MELOSIRA GRANULATA	CEL						
MELOSIRA GRANULATA V. ANGUSTISSIMA	CEL						X
MELOSIRA ISLANDICA	CEL						
MELOSIRA VARIANS	CEL			X			X
NAVICULA	CEL		4.4	60			
NITZSCHIA	CEL						
NITZSCHIA #1	CEL	5	6.7	90			
NITZSCHIA #2	CEL						
NITZSCHIA FILIFORMIS	CEL			X			
OOCYSTIS BORGEI	CEL						
OSCILLATORIA	FIL	2	4.4	60	5	18.1	64
OSCILLATORIA #1	FIL						
OSCILLATORIA #2	FIL						
PEDIASTRUM BIRADIATUM	COL						X
PHACUS LONGICAUDA	CEL						X
PTEROMONAS ANGULOSA	CEL						
RAPHIDIOPSIS	FIL						
SCENEDESMUS BICAUDATUS	COL			X			X
SCENEDESMUS BIJUGA	COL						
SCENEDESMUS DIMORPHUS	COL						X

ATCHAFALAYA
STORET NUMBER: EC59000 CONTINUED

TAXA	FORM	04 15 75			06 14 75		
		S	%C	ALGAL UNITS PER ML	S	%C	ALGAL UNITS PER ML
SCENEDESMUS PROTUBERANS	COL						
SCENEDESMUS QUADRICAUDA	COL			X			
SKELETONEMA POTAMOS	CEL		6.7	90	1	27.5	97
STEPHANODISCUS	CEL						X
STEPHANODISCUS ASTRAEA	CEL		2.2	30			
SYNEDRA ULNA	CEL						
TETRASTRUM STAUROGENIAEFORME	COL			X			
TRACHELOMONAS INTERMEDIA	CEL						X
TOTAL				1350			353

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ATCHAFALAYA
STORET NUMBER: EC60000

                                        NYGAARD TROPHIC STATE INDICES

                               DATE    11 21 74   12 16 75

                        MYXOPHYCEAN    03/0 E      1.00 E
                      CHLOROPHYCEAN    03/0 E      5.00 E
                       EUGLENOPHYTE    0.33 E      0.33 E
                             DIATOM    2.00 E      0.78 E
                           COMPOUND    14/0 E      15.0 E


                                       PALMER'S ORGANIC POLLUTION INDICES

                               DATE    11 21 74   12 16 75

                              GENUS          07         05
                            SPECIES          04         00


                                       SPECIES DIVERSITY AND ABUNDANCE INDICES

                               DATE        11 21 74   12 16 75

                AVERAGE DIVERSITY     H        3.01       3.35
                   NUMBER OF TAXA     S       19.00      29.00
      NUMBER OF SAMPLES COMPOSITED    M        1.00       1.00
                MAXIMUM DIVERSITY  MAXH        4.25       4.86
                  TOTAL DIVERSITY     D     4177.88    3115.50
    TOTAL NUMBER OF INDIVIDUALS/ML    N     1388.00     930.00
                EVENESS COMPONENT     J        0.71       0.69
   MEAN NUMBER OF INDIVIDUALS/TAXA    L       73.05      32.07
  NUMBER/ML OF MOST ABUNDANT TAXON    K      430.00     169.00
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ATCHAFALAYA
STORET NUMBER: E060000 CONTINUED

TAXA	FORM	11 21 74			12 16 75		
		S	%C	ALGAL UNITS PER ML	S	%C	ALGAL UNITS PER ML
ANKISTRODESMUS FALCATUS	CEL					3.0	28
ASTERIONELLA FORMOSA	CEL			X			X
CELL	CEL					3.0	28
CLOSTERIUM	CEL						X
COSCINODISCUS ROTHII V. SUBSALSA	CEL			X	4	12.2	113
CRYPTOMONAS	CEL	3	11.9	165		3.0	28
CYANOPHYTAN FILAMENT	FIL		9.5	132			
CYCLOTELLA MENENGHINIANA	CEL	5	9.5	132	3	15.2	141
CYMBELLA TURGIDA	CEL			X			
DACTYLOCOCCOPSIS	CEL			X			
EUGLENA	CEL					3.0	28
FLAGELLATE #1	CEL					12.2	113
FLAGELLATE #2	CEL	1	31.0	430			
GLENODINIUM OCULATUM	CEL					3.0	28
GOMPHONEMA	CEL						X
GOMPHONEMA OLIVACEUM	CEL				1		X
GYROSIGMA	CEL						X
HANTZSCHIA	CEL						X
MELOSIRA	CEL					18.2	169
MELOSIRA DISTANS	CEL			X	2	3.0	28
MELOSIRA GRANULATA	CEL			X			
MELOSIRA GRANULATA V. ANGUSTISSIMA	CEL						X
MERISMOPEDIA TENUISSIMA	COL		4.8	66			
NAVICULA	CEL				5	12.2	113
NITZSCHIA	CEL			X			X
OSCILLATORIA	FIL						X
PEDIASTRUM BORYANUM	COL						X
PENNATE	CEL						X
PHACUS NORDSTEDTII	CEL		2.4	33			
PHACUS TORTUS	CEL		2.4	33			

ATCHAFALAYA
STCRET NUMBER: E060000 CONTINUEC

TAXA	FORM	11 21 74			12 16 75		
		S	%C	ALGAL UNITS PER ML	S	%C	ALGAL UNITS PER ML
SCENEDESMUS ACUTUS	COL						X
SCENEDESMUS DIMCRPHUS	COL		2.4	33			X
SCENEDESMUS QUADRICAUDA	COL	4	7.1	99		3.0	28
SKELETCNEMA POTAMOS	CEL		4.8	66			X
STEPHANODISCUS ASTRAEA	CEL	2	14.3	199			
STEPHANODISCUS NIAGARAE	CEL					9.1	85
SURIRELLA	CEL						X
TETRAEDRCN MINIMUM	CEL			X			
TRACHELCMCNAS	CEL						X
TCTAL				1388			930

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                                 ATCHAFALAYA
                        STORET NUMBER: E062000

                                              NYGAARD TROPHIC STATE INDICES

                                         DATE    01 18 75   06 14 75

                                  MYXOPHYCEAN     3.00 E     5.00 E
                                CHLOROPHYCEAN     1.00 E     7.00 E
                                EUGLENOPHYTE      0/04 ?     0.25 E
                                       DIATOM     0.62 E     1.25 E
                                     COMPOUND     9.00 E    20.0 E

                                              PALMER'S ORGANIC POLLUTION INDICES

                                         DATE    01 18 75   06 14 75

                                        GENUS         13         10
                                      SPECIES         04         00

                                              SPECIES DIVERSITY AND ABUNDANCE INDICES

                                         DATE    01 18 75   06 14 75

                    AVERAGE DIVERSITY    H          3.67       2.94
                       NUMBER OF TAXA    S         23.00      26.00
         NUMBER OF SAMPLES COMPOSITED    M          1.00       1.00
                    MAXIMUM DIVERSITY MAXH          4.52       4.70
                      TOTAL DIVERSITY    D       6323.41    1743.42
        TOTAL NUMBER OF INDIVIDUALS/ML   N       1723.00     593.00
                    EVENESS COMPONENT    J          0.81       0.63
        MEAN NUMBER OF INDIVIDUALS/TAXA  L         74.91      22.81
     NUMBER/ML OF MOST ABUNDANT TAXON    K        203.00     174.00
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ATCHAFALAYA
STORET NUMBER: E062000 CONTINUED

		01 18 75			06 14 75		
TAXA	FORM	S	%C	ALGAL UNITS PER ML	S	%C	ALGAL UNITS PER ML
ANABAENA	FIL						X
ANABAENOPSIS RACIBORSKII	FIL						X
ANKISTRCDESMUS	CEL						X
APHANIZCMENON FLOS-AQUAE	FIL			X			
ASTERICNELLA FORMOSA	CEL	3	8.8	152			X
CHROOMONAS	CEL		8.8	152			
CLCSTERIUM	CEL			X			
CLCSTERILM KUTZINGII	CEL						X
COELASTRUM MICROPORUM	COL				5	5.9	35
CGSCINODISCUS LACUSTRIS	CEL				2	29.3	174
CRYPTCMCNAS EROSA	CEL	1	11.8	203			
CRYPTOMCNAS MARSSONII	CEL	2	11.8	203			
CYCLCTELLA	CEL		5.9	101			
CYMBELLA	CEL			X			
CYST	CEL		5.9	101			
CACTYLOCCCCOPSIS	CEL		5.9	101			
EUGLENA	CEL						X
EUGLENA TRIPTERIS ?	CEL						X
FRAGILARIA CROTCNENSIS	CEL		3.0	51			
HANTZSCHIA AMPHIGXYS	CEL			X			
MELCSIRA CISTANS	CEL	5	11.8	203		5.9	35
MELOSIRA GRANULATA	CEL			X	1	23.4	139
MELCSIRA GRANULATA V. ANGLSTISSIMA	CEL			X	3	5.9	35
MERISMOPEDIA	COL						X
NAVICULA	CEL		5.9	101			X
NITZSCHIA	CEL						X
NITZSCHIA #1	CEL		3.0	51			
NITZSCHIA #2	CEL			X			
OSCILLATORIA #1	FIL					5.9	35
CSCILLATGRIA #2	FIL				4	5.9	35
FANCORINA MCRUM	COL						X

ATCHAFALAYA
STORET NUMBER: E062000   CONTINUED

TAXA	FORM	01 18 75 S	01 18 75 %C	01 18 75 ALGAL UNITS PER ML	06 14 75 S	06 14 75 %C	06 14 75 ALGAL UNITS PER ML
PHORMIDIUM	FIL		5.9	101			
PTEROMONAS	CEL			X			
SCENEDESMUS BICAUDATUS	COL					5.9	35
SCENEDESMUS BIJUGA							
V. FLEXUOSUS	COL						X
SCENEDESMUS DIMORPHUS	COL						X
SCENEDESMUS QUADRICAUDA	COL		3.0	51		5.9	35
SCHROEDERIA SETIGERA	CEL					5.9	35
SKELETONEMA POTAMOS	CEL						X
STEPHANODISCUS	CEL	4	8.8	152			
SYNEDRA	CEL						X
SYNEDRA ULNA	CEL			X			
TRACHELOMONAS	CEL						X
TOTAL				1723			593

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              ATCHAFALAYA
STCRET NUMBER: E064000

                                          NYGAARD TROPHIC STATE INCICES

                                   DATE   01 18 75

                            MYXCPHYCEAN     2.00 E
                          CHLOROPHYCEAN     2.00 E
                           EUGLENOPHYTE     0.12 7
                                  DIATCM    0.53 F
                               COMPOUND     9.00 E


                                       PALMER'S ORGANIC PCLLUTION INDICES

                                   DATE   01 18 75

                                  GENUS          08
                                SPECIES          00


                                       SPECIES DIVERSITY AND ABUNDANCE INCICES

                                   DATE   01 18 75

               AVERAGE DIVERSITY    H        3.13
                  NUMBER OF TAXA    S       44.00
     NUMBER OF SAMPLES CCMPOSITED   M        1.00
               MAXIMUM DIVERSITY MAXH        5.46
                 TOTAL DIVERSITY    D     4479.03
    TCTAL NUMBER OF INDIVIDUALS/ML   N     1431.00
               EVENESS COMPONENT    J        0.57
     MEAN NUMBER CF INDIVIDUALS/TAXA   L       32.52
   NUMBER/ML OF MOST ABUNDANT TAXON   K      348.00
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ATCHAFALAYA
STORET NUMBER: E064000 CONTINUED

TAXA	FORM	S	%C	ALGAL UNITS PER ML
			01 18 75	
ANKISTRODESMUS	CEL			X
ANKISTRODESMUS FALCATUS	CEL			X
APHANIZOMENON FLOS-AQUAE	FIL			X
ASTERIONELLA FORMOSA	CEL			X
CARTERIA ?	CEL		2.3	33
CHRYSOPHYTAN COCCOID CELL	CEL			X
CLOSTERIUM	CEL			X
COCCONEIS PLACENTULA	CEL			X
COSCINODISCUS ROTHII				
V. SUBSALSA	CEL		1.2	17
CRYPTOMONAS	CEL	3	9.2	132
CYANOPHYTAN FILAMENT	FIL		12.7	182
CYCLOTELLA BODANICA ?	CEL			X
CYCLOTELLA MENENGHINIANA	CEL	5	4.7	67
CYMBELLA	CEL			X
DACTYLOCOCCOPSIS	CEL			X
DIATOMA VULGARE	CEL		1.2	17
EPITHEMIA ?	CEL			X
FRAGILARIA CROTONENSIS	CEL			X
GOMPHONEMA OLIVACEUM	CEL		1.2	17
GYMNODINIUM ORDINATUM ?	CEL			X
GYROSIGMA	CEL			X
LUNATE CELL	CEL		1.2	17
MELOSIRA DISTANS	CEL	1	24.3	348
MELOSIRA GRANULATA	CEL			X
MELOSIRA GRANULATA				
V. ANGUSTISSIMA	CEL		3.5	50
MELOSIRA VARIANS	CEL			X
NAVICULA #2	CEL		3.5	50
NAVICULA EXIGUA	CEL			X
NITZSCHIA ? #1	CEL			X
NITZSCHIA #2	CEL			X

ATCHAFALAYA
STCRET NUMBER: E064000 CONTINUED

		01 18 75		
TAXA	FORM	S	%C	ALGAL UNITS PER ML
NITZSCHIA #4	CEL			X
NITZSCHIA SPP.	CEL		4.6	66
NITZSCHIA TRYBLICNELLA				
V. LEVIDENSIS	CEL			X
OSCILLATORIA	FIL			X
SCENEDESMUS DIMCRPHUS	COL			X
SCENEDESMUS QUADRICAUDA	COL			X
SKELETCNEMA POTAMOS	CEL			X
STAURASTRUM	CEL			X
STEPHANODISCUS ASTRAEA	CEL	2	23.5	336
SURIRELLA #1	CEL			X
SURIRELLA #2	CEL			X
SYNEDRA ULNA VARS.	CEL			X
SYNURA	CEL			X
TRACHELCMCNAS INTERMEDIA	CEL	4	6.9	99
TCTAL				1431

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                    ATCHAFALAYA
            STORET NUMBER: E065000

                                        NYGAARD TROPHIC STATE INDICES

                                  DATE    01 18 75   04 18 75

                           MYXOPHYCEAN    1.00 E     03/0 E
                         CHLOROPHYCEAN    2.00 E     01/0 E
                          EUGLENOPHYTE    0/03 ?     0.75 E
                                DIATOM    2.00 E     0.60 E
                              COMPOUND    9.00 E     10/0 E

                                        PALMER'S ORGANIC POLLUTION INDICES

                                  DATE    01 18 75   04 18 75

                                 GENUS          04         07
                               SPECIES          00         00

                                       SPECIES DIVERSITY AND ABUNDANCE INDICES

                                  DATE    01 18 75   04 18 75

                 AVERAGE DIVERSITY     H       2.67       2.51
                    NUMBER OF TAXA     S      15.00      19.00
       NUMBER OF SAMPLES COMPOSITED    M       1.00       1.00
                 MAXIMUM DIVERSITY  MAXH       3.91       4.25
                   TOTAL DIVERSITY     D    1775.55    4121.42
     TOTAL NUMBER OF INDIVIDUALS/ML    N     665.00    1642.00
                 EVENESS COMPONENT     J       0.68       0.59
     MEAN NUMBER OF INDIVIDUALS/TAXA   L      44.33      86.42
    NUMBER/ML OF MOST ABUNDANT TAXON   K     212.00     441.00
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ATCHAFALAYA
STORET NUMBER: E065000 CONTINUED

		01 18 75			04 18 75		
TAXA	FORM	S	%C	ALGAL UNITS PER ML	S	%C	ALGAL UNITS PER ML
ASTERIONELLA FORMOSA	CEL	1	15.9	106			
CENTRIC DIATOMS	CEL	3	15.9	106			
CHLAMYDOMONAS	CEL				2	26.9	441
CLOSTERIUM	CEL		4.1	27			
COCCONEIS	CEL					4.9	80
COSCINODISCUS ROTHII V. SUBSALSA	CEL			X			
CRUCIGENIA TETRAPEDIA	COL						X
CRYPTOMONAS	CEL			X			
CRYPTOMONAS EROSA	CEL				1	24.4	401
CYCLOTELLA MENEGHINIANA	CEL			X			
CYMBELLA	CEL						X
DACTYLOCOCCOPSIS	CEL					21.9	360
FLAGELLATE #1	CEL	5	12.0	80	5	9.7	160
GOMPHONEMA	CEL			X			
GYROSIGMA SCALPROIDES	CEL						X
LEPOCINCLIS	CEL						X
MELOSIRA	CEL			X			
MELOSIRA DISTANS	CEL	2	31.9	212			X
NITZSCHIA	CEL	4	12.0	80			
NITZSCHIA ACICULARIS	CEL						X
NITZSCHIA FILIFORMIS	CEL						X
NITZSCHIA SPP.	CEL				4	7.3	120
OSCILLATORIA	FIL		4.1	27			X
PEDIASTRUM BORYANUM	COL			X			
PHORMIDIUM	FIL						X
SCENEDESMUS ACUMINATUS	COL		4.1	27			
STEPHANODISCUS	CEL			X	3	4.9	80
STEPHANODISCUS ASTRAEA	CEL						X
TRACHELOMONAS URCEOLATA	CEL						X
TRACHELOMONAS VOLVOCINA	CEL						X
TOTAL				665			1642

ATCHAFALAYA
STORET NUMBER: 6001000

NYGAARD TROPHIC STATE INDICES

DATE	01 22 74	11 20 74	06 12 75
MYXOPHYCEAN	01/0	0/0 O	04/0 E
CHLOROPHYCEAN	04/0 E	04/0 E	13/0 E
EUGLENOPHYTE	0.80 E	1.75 E	0.53 E
DIATOM	1.00 E	3.00 E	1.00 E
COMPOUND	13/0 E	14/0 E	30/0 E

PALMER'S ORGANIC POLLUTION INDICES

DATE	01 22 74	11 20 74	06 12 75
GENUS	10	06	15
SPECIES	03	00	07

SPECIES DIVERSITY AND ABUNDANCE INDICES

	DATE	01 22 74	11 20 74	06 12 75
AVERAGE DIVERSITY	H	2.24	1.81	2.86
NUMBER OF TAXA	S	31.00	17.00	44.00
NUMBER OF SAMPLES COMPOSITED	M	1.00	1.00	1.00
MAXIMUM DIVERSITY	MAXH	4.95	4.09	5.46
TOTAL DIVERSITY	D	21194.88	17687.32	32203.60
TOTAL NUMBER OF INDIVIDUALS/ML	N	9462.00	9772.00	11260.00
EVENESS COMPONENT	J	0.45	0.44	0.52
MEAN NUMBER OF INDIVIDUALS/TAXA	L	305.23	574.82	255.91
NUMBER/ML OF MOST ABUNDANT TAXON	K	5135.00	4703.00	5376.00

ATCHAFALAYA
STORET NUMBER: G0010C0 CONTINUED

TAXA	FORM	01 22 74			11 20 74			06 12 75		
		S	%C	ALGAL UNITS PER ML	S	%C	ALGAL UNITS PER ML	S	%C	ALGAL UNITS PER ML
ACTINASTRUM	CEL						X			
ACTINASTRUM HANTZSCHII V. FLUVIATILE	CEL			X						X
ANKISTRODESMUS ?	CEL					0.6	61			
ANKISTRODESMUS FALCATUS	CEL								0.9	102
ANKISTRODESMUS FALCATUS V. MIRABILIS	CEL		2.4	228					1.8	205
APHANOTHECE	COL									X
CARTERIA	CEL		1.1	101						
CENTRIC DIATOM	CEL		0.3	25	3	48.1	4703	1	47.7	5376
CENTRIC DIATOM #1	CEL		0.5	51						
CENTRIC DIATOM #2	CEL			X						X
CHILOMONAS PARAMAECIUM	CEL	4	4.5	430						X
CHLAMYDOMONAS GLOBOSA	CEL								1.8	205
CHLOROCOCCALEAN COCCOID CELL	CEL									X
CHLOROGONIUM	CEL			X						
CHLOROPHYTAN COCCOID CELL	CEL				2	28.1	2749			
CHROOMONAS NORDSTEDTII	CEL	5	2.9	278				3	10.0	1126
COCCONEIS PLACENTULA	CEL			X						
CRYPTOMONAS EROSA	CEL							2	11.4	1280
CRYPTOMONAS MARSSONII	CEL	2	13.4	1265	1	18.7	1832			
CRYPTOMONAS REFLEXA	CEL		0.8	76						
CYMATOPLEURA	CEL			X						
DACTYLOCOCCOPSIS	CEL		0.3	25						
DACTYLOCOCCOPSIS IRREGULARIS	CEL							5	6.8	768
DICTYOSPHAERIUM	COL									X
DINOBRYON CYLINDRICUM	CEL			X						
ELAKATOTHRIX GELATINOSA	CEL									X
EUGLENA	CEL		0.5	51			X			X
EUGLENA #2	CEL			X						X
EUGLENA #3	CEL									X
EUGLENA #4	CEL									X

ATCHAFALAYA
STORET NUMBER: G001000 CONTINUED

TAXA	FORM	01 22 74			11 20 74			06 12 75		
		S	%C	ALGAL UNITS PER ML	S	%C	ALGAL UNITS PER ML	S	%C	ALGAL UNITS PER ML
EUGLENA GRACILIS	CEL						X			
EUGLENA OXYURIS ?	CEL						X			
EUGLENOID FLAGELLATE	CEL									X
EUNOTIA CURVATA	CEL			X						X
FLAGELLATE #1	CEL	1	54.3	5135						
FLAGELLATE #4	CEL								0.9	102
GLENODINIUM OCULATUM	CEL		0.3	25					0.9	102
GOLENKINIA RADIATA	CEL								0.5	51
GOMPHONEMA	CEL						X			
GYMNODINIUM ALBULUM	CEL									X
LEPOCINCLIS ACUTA ?	CEL									X
MALLOMONAS	CEL		1.6	152						
MALLOMONAS AKROKOMOS ?	CEL		0.5	51						
MELOSIRA DISTANS	CEL			X			X			X
MERISMOPEDIA TENUISSIMA	COL								2.3	256
NITZSCHIA	CEL		0.5	51						
NITZSCHIA #1	CEL							4	5.5	614
NITZSCHIA #2	CEL									X
OPHIOCYTIUM CAPITATUM V. LONGISPINUM	CEL								1.4	154
OSCILLATORIA SUBBREVIS	FIL									X
PERIDINIUM QUADRIDENS	CEL								0.5	51
PHACUS CURVICAUDA	CEL									X
PHACUS GLABER	CEL									X
PHACUS TORTUS	CEL						X			
PTEROMONAS	CEL		0.3	25						
PTEROMONAS ANGULOSA	CEL			X						
SCENEDESMUS DIMORPHUS	COL				5	0.6	61			X
SCENEDESMUS ECORNIS V. DISCIFORMIS	COL								0.9	102
SCENEDESMUS INTERMEDIUS V. BICAUDATUS	COL					0.6	61			

ATCHAFALAYA
STCRET NUMBER: G0010C0 CONTINUEC

TAXA	FORM	01 22 74			11 20 74			06 12 75		
		S	%C	ALGAL UNITS PER ML	S	%C	ALGAL UNITS PER ML	S	%C	ALGAL UNITS PER ML
SCENEDESMUS QUACRICAUDA	COL								0.9	102
SKELETCNEMA POTAMOS	CEL				4	1.9	183		C.9	102
SPERMATOZOOPSIS EXULTANS	CEL								2.7	307
SYNEDRA	CEL								0.5	51
SYNURA UVELLA	CEL	3	15.8	1493						
TETRAEDRCN CAUDATUM	CEL								0.5	51
TETRAEDRCN MUTICUM	CEL			X						
TETRAEDRON REGULARE ? V. INCUS	CEL								0.9	102
TETRASTRUM GLABRUM	COL									X
TETRASTRUM HETERACANTHUM	COL			X						
TRACHELCMONAS	CEL						X			
TRACHELCMONAS ABRUPTA	CEL					0.6	61			
TRACHELCMCNAS HISPIDA V. PUNCTATA	CEL			X					C.5	51
TRACHELCMONAS INTERMEDIA	CEL					0.6	61			
TRACHELCMCNAS OBLCNGA	CEL			X						
TCTAL				9462			9772			11260

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                ATCHAFALAYA
        STORET NUMBER: GC020C0

                                            NYGAARD TROPHIC STATE INDICES

                                        DATE    01 22 75   06 12 75

                                MYXOPHYCEAN     0/0  0     4.00 E
                              CHLOROPHYCEAN     03/0 E     15.0 E
                              EUGLENOPHYTE      1.00 E     0.53 E
                                     DIATOM     01/0 E     1.00 E
                                   COMPOUND     07/0 E     32.0 E


                                            PALMER'S ORGANIC POLLUTION INDICES

                                        DATE    01 22 75   06 12 75

                                      GENUS          04         10
                                    SPECIES          00         00


                                           SPECIES DIVERSITY AND ABUNDANCE INDICES

                                        DATE    01 22 75   06 12 75

                AVERAGE DIVERSITY    H          1.73       2.63
                   NUMBER OF TAXA    S         22.00      48.00
      NUMBER OF SAMPLES COMPOSITED   M          1.00       1.00
                MAXIMUM DIVERSITY MAXH          4.46       5.58
                  TOTAL DIVERSITY    D      24963.90    7840.03
     TOTAL NUMBER OF INDIVIDUALS/ML  N      14430.00    2981.00
                 EVENESS COMPONENT   J          0.39       0.47
      MEAN NUMBER OF INDIVIDUALS/TAXA L       655.91      62.10
   NUMBER/ML OF MOST ABUNDANT TAXON  K       7854.00     922.00
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ATCHAFALAYA
STORET NUMBER: G002000 CONTINUED

TAXA	FORM	01 22 75 S	01 22 75 %C	01 22 75 ALGAL UNITS PER ML	06 12 75 S	06 12 75 %C	06 12 75 ALGAL UNITS PER ML
ACTINASTRUM HANTZSCHII V. FLUVIATILE	CEL						X
ANKISTRODESMUS ?	CEL				5	9.3	277
ANKISTRODESMUS FALCATUS	CEL						X
ANKISTRODESMUS FALCATUS V. MIRABILIS	CEL		0.2	31			
CARTERIA	CEL	5	1.5	218		3.1	92
CHLAMYDOMONAS	CEL	4	3.5	499		2.0	61
CHLOROGONIUM MINIMUM	CEL			X			
CHROOCOCCUS	COL						X
CHROOMONAS	CEL	2	54.4	7854			
CLOSTERIUM	CEL						X
COCCONEIS	CEL						X
COELASTRUM SPHAERICUM	COL						X
CRYPTOMONAS EROSA	CEL			X			X
CRYPTOMONAS MARSSONII	CEL			X			
CRYPTOMONAS REFLEXA	CEL			X			X
CRYPTOMONAS SPP.	CEL	1	28.3	4083	1	30.9	922
CYCLOTELLA MENEGHINIANA	CEL				3	19.6	584
DINOBRYON	CEL						X
EUGLENA	CEL		0.2	31		1.0	31
EUGLENA TRIPTERIS	CEL						X
FLAGELLATE #1	CEL						X
FLAGELLATES	CEL				2	24.8	738
GLENODINIUM OCULATUM	CEL			X			
LEPOCINCLIS	CEL			X			
LUNATE CELL	CEL		0.7	94			
MELOSIRA DISTANS	CEL						X
MERISMOPEDIA TENUISSIMA	COL						X
NITZSCHIA	CEL					2.0	61
OOCYSTIS	CEL						X
OSCILLATORIA #1	FIL						X

ATCHAFALAYA
STORET NUMBER: G002000 CONTINUEC

TAXA	FORM	01 22 75 S	01 22 75 %C	01 22 75 ALGAL UNITS PER ML	06 12 75 S	06 12 75 %C	06 12 75 ALGAL UNITS PER ML
GSCILLATCRIA ANGUSTA	FIL						X
PANDORINA MORUM	COL						X
PECIASTRUM TETRAS V. TETRAOCCN	COL						X
PENNATE	CEL					3.1	92
PHACUS #1	CEL						X
PHACLS GLABER	CEL						X
PHACUS LCNGICAUDA	CEL						X
PTERCMCNAS ?	CEL						X
PTERCMCNAS ANGULCSA	CEL			X			X
SCENEDESMUS ABUNCANS	COL						X
SCENEDESMUS BICALDATUS	CCL						X
SCENEDESMUS DIMORPHLS	CCL			X			X
SCENEDESMUS ECORNIS V. DISCIFCRMIS	COL						X
SCENEDESMUS PROTUBERANS	COL						X
SCHRCEDERIA SETIGERA	CEL						X
SKELETCNEMA POTAMOS	CEL		0.4	62			X
SYNURA #1	CEL			X			
SYNLRA SPP.	CEL	3	10.6	1527			
SYNLRA UVELLA	CEL			X			
TETRAECRCN CAUDATUM	CEL						X
TETRAECRCN REGULARE	CEL			X			
TETRAECRCN TUMICULUM	CEL					1.0	31
THCRAKCMCNAS ? FELCMANII	CEL			X			
TRACHELCMCNAS #1	CEL						X
TRACHELCMONAS #2	CEL						X
TRACHELCMCNAS #3	CEL						X
TRACHELCMONAS INTERMEDIA	CEL		0.2	31			X
TRACHELCMCNAS SPP.	CEL				4	3.1	92
TRACHELCMCNAS VCLVCCINA	CEL						X
TREUBARIA	CEL						X
TCTAL				14430			2981

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      ATCHAFALAYA
STORET NUMBER: 0003000


                              NYGAARD TROPHIC STATE INDICES

                      DATE    01 21 75   04 15 75   06 12 75

               MYXOPHYCEAN     0/0  C     3.00 E     06/0 E
            CHLOROPHYCEAN     02/0 E     11.0 E     12/0 E
              EUGLENOPHYTE     0.50 E     0.79 E     0.44 E
                    DIATOM     0/0  ?     0.50 E     1.25 E
                  COMPOUND     03/0 E     28.0 E     31/0 E


                             PALMER'S ORGANIC POLLUTION INDICES

                      DATE    01 21 75   04 15 75   06 12 75

                     GENUS          00         08         14
                   SPECIES          00         03         00


                          SPECIES DIVERSITY AND ABUNDANCE INDICES

                      DATE    01 21 75   04 15 75   06 12 75

           AVERAGE DIVERSITY    H      0.68       3.27       4.34
              NUMBER OF TAXA    S      6.00      43.00      45.00
  NUMBER OF SAMPLES COMPOSITED  M      1.00       1.00       1.00
          MAXIMUM DIVERSITY  MAXH      2.58       5.43       5.49
             TOTAL DIVERSITY    D    295.80    5516.49   13605.90
 TOTAL NUMBER OF INDIVIDUALS/ML N    435.00    1687.00    3135.00
          EVENESS COMPONENT     J      0.26       0.60       0.79
 MEAN NUMBER OF INDIVIDUALS/TAXA L    72.50      39.23      69.67
NUMBER/ML OF MOST ABUNDANT TAXON K   392.00     628.00     420.00
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ATCHAFALAYA
STCRET NUMBER: GC030C0 CONTINUEC

TAXA	FORM	01 21 75			04 15 75			06 12 75		
		S	%C	ALGAL UNITS PER ML	S	%C	ALGAL UNITS PER ML	S	%C	ALGAL UNITS PER ML
ACTINASTRUM	CEL							5	5.7	180
ACTINASTRUM HANTZSCHII V. FLUVIATILE	CEL						X			
ANABAENA	FIL						X			
ANABAENA PLANCTONICA	FIL									X
ANKISTRODESMUS	CEL		2.1	9						
ANKISTRCDESMUS FALCATUS	CEL						X		1.4	45
ANKISTRODESMUS FALCATUS V. MIRABILIS	CEL					8.6	145			
CARTERIA	CEL								1.0	30
CENTRIC DIATOM	CEL						X			
CERATIUM HIRUNDINELLA F. BRACHYCERAS	CEL									X
CHLAMYCCMONAS	CEL					2.8	48			
CHLAMYDCMONAS GLCBCSA	CEL						X			
CHLAMYDCMONAS SPP.	CEL									
CHLOROPHYTAN COLCNY	COL					4.3	72			
CLCSTERILM	CEL						X			
COCCONEIS PLACENTULA	CEL						X			
COELASTRUM CAMBRICUM V. INTERMEDIUM	COL								1.9	6C
COELASTRUM MICROPORUM	COL									
CRUCIGENIA	COL								0.5	15
CRUCIGENIA TETRAPEDIA	CCL						X			
CRYPTOMCNAS REFLEXA	CEL									
CRYPTOMCNAS SPP.	CEL				1	37.2	628	1	9.6	30C
CYCLOTELLA	CEL								0.5	15
CYCLCTELLA MENEGHINIANA	CEL									
DICTYOSPHAERIUM EHRENBERGIANUM	CCL									
ELAKATCTHRIX	CEL									
EUGLENA	CEL	2	3.0	13			X			
EUGLENA #1	CEL				4	4.3	72			

ATCHAFALAYA
STORET NUMBER: G003000 CONTINUED

TAXA	FORM	01 21 75			04 15 75			06 12 75		
		S	%C	ALGAL UNITS PER ML	S	%C	ALGAL UNITS PER ML	S	%C	ALGAL UNITS PER ML
EUGLENA #2	CEL									X
EUGLENA ACUS	CEL					1.4	24			
EUGLENA OXYURIS	CEL						X			
EUGLENA SPP.	CEL							2	4.8	150
FLAGELLATE #1	CEL					4.3	72		1.9	60
FLAGELLATE #2	CEL								4.8	150
FLAGELLATES	CEL	1	90.1	392						
GOLENKINIA	CEL								0.5	15
GOMPHONEMA	CEL						X			
GOMPHONEMA ACUMINATUM V. TRIGONOCEPHALA	CEL								0.5	15
GYMNODINIUM ALBULUM	CEL									
GYMNODINIUM ORDINATUM	CEL					1.4	24			
KIRCHNERIELLA	CEL					8.6	145		1.0	30
LAGERHEIMIA	CEL									X
LEPOCINCLIS	CEL					1.4	24			
LEPOCINCLIS FUSIFORMIS ?	CEL						X			
LEPOCINCLIS GLABRA F. MINOR	CEL								4.8	150
LYNGBYA	FIL								10.0	315
MALLOMONAS	CEL								1.9	00060
MELOSIRA	CEL				2	11.4	193			
MELOSIRA DISTANS	CEL								4.8	150
MELOSIRA GRANULATA	CEL									X
MELOSIRA GRANULATA V. ANGUSTISSIMA F. SPIRALIS	CEL									
MELOSIRA VARIANS	CEL						X			
MERISMOPEDIA MINIMA	COL									
MERISMOPEDIA TENUISSIMA	COL								5.3	165
MESOSTIGMA VIRIDIS	CEL									
NAVICULA	CEL					1.4	24			
NITZSCHIA	CEL						X			

ATCHAFALAYA
STORET NUMBER: G003000 CONTINUED

TAXA	FORM	01 21 75			04 15 75			06 12 75		
		S	%C	ALGAL UNITS PER ML	S	%C	ALGAL UNITS PER ML	S	%C	ALGAL UNITS PER ML
NITZSCHIA #1	CEL									X
NITZSCHIA ACICULARIS	CEL									X
NITZSCHIA FILIFCRMIS	CEL								13.4	420
NITZSCHIA SPP.	CEL									
COCYSTIS	CEL						X			
OPHIOCYTIUM CAPITATUM V. LONGISPINUM	CEL					1.4	24		0.5	15
CSCILLATCRIA	FIL						X			
OSCILLATORIA LIMNETICA	FIL						X			
PENNATE	CEL						X			
PENNATES	CEL	5	3.0	13				4	2.9	90
PERIDINIUM UMBONATUM	CEL									
PHACUS	CEL						X		0.5	15
PHACUS ACUMINATUS	CEL						X			
PHACUS HELIKOIDES	CEL						X		C.5	15
PHACUS LCNGICAUCA	CEL									
PHACUS MEGALOPSIS	CEL									
PLANCTONEMA ?	FIL									
PTERCMCNAS ANGULCSA	CEL	3	0.9	4						
PTERCMONAS CRUCIATA	CEL									X
RAPHIDICPSIS	FIL								3.3	105
RAPHIDIOPSIS CURVATA	FIL									
SCENEDESMUS	COL	4	C.9	4						
SCENEDESMUS ABUNCANS	CCL								1.0	30
SCENEDESMUS BICAUDATLS	CGL								1.4	45
SCENEDESMUS BIJUGA	COL								1.0	3C
SCENEDESMUS DIMCRPHUS	COL									
SCENEDESMUS INTERMEDIUS	COL									
SCENEDESMUS INTERMEDIUS V. BICALCATUS	COL						X			
SCENEDESMUS QUADRICAUDA	COL					1.4	24		1.0	3C
SKELETCNEMA POTAMCS	CEL									

ATCHAFALAYA
STORET NUMBER: G003000 CONTINUED

TAXA	FORM	01 21 75			04 15 75			06 12 75		
		S	%C	ALGAL UNITS PER ML	S	%C	ALGAL UNITS PER ML	S	%C	ALGAL UNITS PER ML
SPERMATGZOOPSIS	CEL								0.5	15
STEPHANODISCUS	CEL								6.7	210
SYNEDRA	CEL						X			X
TETRAEDRON	CEL						X			
TETRAEDRON MINIMUM	CEL									X
TETRAEDRON REGULARE V. GRANULATA	CEL								1.0	30
TETRAEDRON TRIGONUM ?	CEL						X			
TETRAEDRON TRIGONUM V. GRACILE	CEL									
TETRASTRUM GLABRUM	COL									
TETRASTRUM STAUROGENIAEFORME	COL					2.8	48			
TRACHELOMONAS #1	CEL									
TRACHELOMONAS #2	CEL									X
TRACHELOMONAS GIBBEROSA	CEL				5	1.4	24			
TRACHELOMONAS HISPICA	CEL				3	4.3	72			X
TRACHELOMONAS LONGICAUDA	CEL									X
TRACHELOMONAS SPP.	CEL							3	5.7	180
TRACHELOMONAS VOLVOCINA	CEL									
TREUBARIA	CEL									
ULOTHRIX	FIL					1.4	24			
TOTAL				435			1687			3135

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                    ATCHAFALAYA
          STCRET NUMBER: G003000       CONTINUEC

                                                  NYGAARC TROPHIC STATE INCICES

                                           DATE    12 12 75

                                    MYXOPHYCEAN     2.00 E
                                  CHLOROPHYCEAN     12.0 E
                                   EUGLENOPHYTE     0.36 E
                                         DIATOM     2.50 E
                                       COMPCUND     24.0 E


                                                PALMER'S ORGANIC POLLUTICN INDICES

                                           CATE    12 12 75

                                          GENUS          15
                                        SPECIES          03


                                              SPECIES DIVERSITY AND ABUNDANCE INCICES

                                           CATE    12 12 75

                       AVERAGE DIVERSITY     H        3.06
                          NUMBER CF TAXA     S       40.00
              NUMBER OF SAMPLES COMPOSITED   M        1.00
                       MAXIMUM DIVERSITY  MAXH        5.32
                         TOTAL DIVERSITY     D    49914.72
          TOTAL NUMBER OF INDIVIDUALS/ML     N    16312.00
                       EVENESS CCMPCNENT     J        0.58
          MEAN NUMBER CF INDIVIDUALS/TAXA    L      407.80
        NUMBER/ML CF MOST ABUNCANT TAXON     K     5034.C0
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ATCHAFALAYA
STORET NUMBER: G003000 CONTINUED

		12 12 75		
TAXA	FORM	S	%C	ALGAL UNITS PER ML
ACTINASTRUM	CEL			
ACTINASTRUM HANTZSCHII V. FLUVIATILE	CEL			
ANABAENA	FIL			
ANABAENA PLANCTONICA	FIL			
ANKISTRODESMUS	CEL			
ANKISTRODESMUS FALCATUS	CEL	3	13.8	2255
ANKISTRODESMUS FALCATUS V. MIRABILIS	CEL			
CARTERIA	CEL			X
CENTRIC DIATOM	CEL			
CERATIUM HIRUNDINELLA F. BRACHYCERAS	CEL			
CHLAMYDOMONAS	CEL			
CHLAMYDOMONAS GLOBOSA	CEL			
CHLAMYDOMONAS SPP.	CEL		1.7	282
CHLOROPHYTAN COLONY	COL			
CLOSTERIUM	CEL			X
COCCONEIS PLACENTULA	CEL			
COELASTRUM CAMBRICUM V. INTERMEDIUM	COL			
COELASTRUM MICROPORUM	COL			X
CRUCIGENIA	COL			
CRUCIGENIA TETRAPEDIA	COL		0.5	81
CRYPTOMONAS REFLEXA	CEL			X
CRYPTOMONAS SPP.	CEL	4	4.4	725
CYCLOTELLA	CEL			
CYCLOTELLA MENEGHINIANA	CEL		2.0	322
DICTYOSPHAERIUM EHRENBERGIANUM	COL		0.5	81
ELAKATOTHRIX	CEL			X
EUGLENA	CEL			X
EUGLENA #1	CEL			

ATCHAFALAYA
STCRET NUMBER: G003000 CONTINUEC

TAXA	FORM	S	%C	12 12 75 ALGAL UNITS PER ML
EUGLENA #2	CEL			
EUGLENA ACUS	CEL			
EUGLENA CXYURIS	CEL			
EUGLENA SPP.	CEL			
FLAGELLATE #1	CEL			X
FLAGELLATE #2	CEL			
FLAGELLATES	CEL	2	25.2	4108
GCLENKINIA	CEL			
GOMPHONEMA	CEL			
GOMPHONEMA ACUMINATUM V. TRIGCNOCEPHALA	CEL			
GYMNODINIUM ALBULUM	CEL		1.5	242
GYMNODINIUM ORDINATUM	CEL			
KIRCHNERIELLA	CEL			
LAGERHEIMIA	CEL			
LEFCCINCLIS	CEL			
LEPOCINCLIS FUSIFORMIS ?	CEL			
LEFCCINCLIS GLABRA F. MINCR	CEL			
LYNGBYA	FIL			
MALLCMCNAS	CEL			
MELOSIRA	CEL		1.5	242
MELOSIRA DISTANS	CEL	5	5.4	886
MELCSIRA GRANULATA	CEL			
MELOSIRA GRANULATA V. ANCLSTISSIMA F. SPIRALIS	CEL			X
MELCSIRA VARIANS	CEL			
MERISMOPEDIA MINIMA	CCL		0.5	81
MERISMOPEDIA TENUISSIMA	COL			
MESOSTIGMA VIRICIS	CEL		0.2	40
NAVICULA	CEL			
NITZSCHIA	CEL			

ATCHAFALAYA
STORET NUMBER: GC030C0 CONTINUED

TAXA	FORM	S	%C	ALGAL UNITS PER ML
		12 12 75		
NITZSCHIA #1	CEL			X
NITZSCHIA ACICULARIS	CEL			X
NITZSCHIA FILIFORMIS	CEL			
NITZSCHIA SPP.	CEL	1	30.9	5034
OOCYSTIS	CEL			
OPHIOCYTIUM CAPITATUM V. LONGISPINUM	CEL			
OSCILLATORIA	FIL			X
OSCILLATORIA LIMNETICA	FIL			
PENNATE	CEL			
PENNATES	CEL			
PERIDINIUM UMBONATUM	CEL			
PHACUS	CEL			X
PHACUS ACUMINATUS	CEL			
PHACUS HELIKOIDES	CEL			
PHACUS LONGICAUDA	CEL			
PHACUS MEGALOPSIS	CEL			X
PLANCTONEMA ?	FIL		0.5	81
PTEROMONAS ANGULOSA	CEL			X
PTEROMONAS CRUCIATA	CEL			X
RAPHIDIOPSIS	FIL			
RAPHIDIOPSIS CURVATA	FIL			
SCENEDESMUS	COL			
SCENEDESMUS ABUNDANS	COL		0.2	40
SCENEDESMUS BICAUDATUS	COL			
SCENEDESMUS BIJUGA	COL			
SCENEDESMUS DIMORPHUS	COL		1.7	282
SCENEDESMUS INTERMEDIUS	COL		0.7	121
SCENEDESMUS INTERMEDIUS V. BICALCATUS	COL		0.7	121
SCENEDESMUS QUADRICAUDA	COL			
SKELETONEMA POTAMOS	CEL		4.7	765

ATCHAFALAYA
STORET NUMBER: G003000 CONTINUED

TAXA	FORM	S	%C	12 12 75 ALGAL UNITS PER ML
SPERMATOZOOPSIS	CEL		0.2	40
STEPHANODISCUS	CEL			
SYNEDRA	CEL			
TETRAEDRON	CEL			
TETRAEDRON MINIMUM	CEL			
TETRAEDRON REGULARE				
V. GRANULATA	CEL			
TETRAEDRON TRIGONUM ?	CEL			
TETRAEDRON TRIGONUM				
V. GRACILE	CEL			X
TETRASTRUM GLABRUM	COL		1.7	282
TETRASTRUM STAUROGENIAEFORME	COL			
TRACHELOMONAS #1	CEL		1.0	161
TRACHELOMONAS #2	CEL			
TRACHELOMONAS GIBBEROSA	CEL			
TRACHELOMONAS HISPIDA	CEL			
TRACHELOMONAS LONGICAUDA	CEL			
TRACHELOMONAS SPP.	CEL			
TRACHELOMONAS VOLVOCINA	CEL		0.2	40
TREUBARIA	CEL			X
ULOTHRIX	FIL			
TOTAL				16312

```
                ATCHAFALAYA
       STORET NUMBER: GC04000

                                   NYGAARD TROPHIC STATE INDICES

                            DATE    11 20 74    12 18 74    12 11 75

                     MYXOPHYCEAN     2.00 E      6.00 E      5.00 E
                   CHLOROPHYCEAN     3.00 E      4.00 E     13.0 E
                    EUGLENOPHYTE     0.40 E      0.90 E      0.61 E
                          DIATOM     1.75 E      1.25 E      0.50 E
                        COMPOUND    14.0 E      24.0 E      33.0 E

                                 PALMER'S ORGANIC POLLUTION INDICES

                            DATE    11 20 74    12 18 74    12 11 75

                           GENUS          00          15          12
                         SPECIES          00          00          10

                                SPECIES DIVERSITY AND ABUNDANCE INDICES

                            DATE    11 20 74    12 18 74    12 11 75

               AVERAGE DIVERSITY     H     1.22        3.11        2.75
                  NUMBER OF TAXA     S    23.00       38.00       50.00
      NUMBER OF SAMPLES COMPOSITED   M     1.00        1.00        1.00
               MAXIMUM DIVERSITY  MAXH     4.52        5.25        5.64
                 TOTAL DIVERSITY     D  1775.10    34253.54    34938.75
    TOTAL NUMBER OF INDIVIDUALS/ML   N  1455.00    11014.00    12705.00
               EVENESS COMPONENT     J     0.27        0.59        0.49
  MEAN NUMBER OF INDIVIDUALS/TAXA    L    63.26      289.84      254.10
  NUMBER/ML OF MOST ABUNDANT TAXON   K  1141.00     3004.00     5789.00
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ATCHAFALAYA
STORET NUMBER: G004000 CONTINUED

TAXA	FORM	11 20 74			12 18 74			12 11 75		
		S	%C	ALGAL UNITS PER ML	S	%C	ALGAL UNITS PER ML	S	%C	ALGAL UNITS PER ML
ANKISTRODESMUS ?	CEL			X	4	8.4	921			
ANKISTRODESMUS FALCATUS	CEL									X
ANKISTRCDESMUS FALCATUS V. MIRABILIS	CEL							2	16.6	2110
APHANIZOMENON FLOS-AQUAE	FIL					0.4	40			
APHANOCAPSA DELICATISSIMA ?	CCL									X
CENTRIC DIATOM	CEL				3	11.3	1242			
CENTRIC DIATOMS	CEL	4	5.4	79						
CHROOMONAS	CEL				2	26.2	2884	3	9.3	1177
CLOSTERIUM	CEL						X			X
COCCONEIS	CEL									X
COCCONEIS #1	CEL			X						
COCCONEIS PLACENTULA V. LINEATA	CEL			X						
COELASTRUM MICROPORUM	COL									X
COSCINODISCUS LACUSTRIS	CEL			X						
COSMARIUM	CEL			X						
CRUCIGENIA TETRAPEDIA	COL									X
CRYPTOMONAS EROSA	CEL					2.5	280	4	7.3	932
CRYPTOMONAS REFLEXA	CEL	2	2.7	39			X			X
CYANOPHYTAN FILAMENT	FIL			X						
CYCLOTELLA MENEGHINIANA	CEL			X						
CYST	CEL						X			
DACTYLOCOCCOPSIS	CEL					5.8	641			
DACTYLOCOCCOPSIS ?	CEL		2.7	39						
DACTYLOCOCCOPSIS IRREGULARIS	CEL								3.5	442
DICTYOSPHAERIUM PULCHELLUM	COL					0.4	40			
EUGLENA	CEL			X						X
EUGLENA #1	CEL									X
EUGLENA #2	CEL									X
EUGLENA #3	CEL									X
EUGLENA ACUS	CEL						X			X

ATCHAFALAYA
STORET NUMBER: GC040C0 CONTINUED

TAXA	FORM	11 20 74			12 18 74			12 11 75		
		S	%C	ALGAL UNITS PER ML	S	%C	ALGAL UNITS PER ML	S	%C	ALGAL UNITS PER ML
EUGLENA GRACILIS	CEL						X			X
EUGLENA OXYURIS	CEL						X			X
EUGLENA SUBEHRENBERGII ?	CEL									X
FLAGELLATE	CEL				5	4.0	441		1.2	147
FLAGELLATES	CEL	1	78.4	1141						
GLENODINIUM OCULATUM	CEL						X			X
GOMPHONEMA	CEL			X						
GYMNODINIUM ALBULUM	CEL					0.4	40			
HANTZSCHIA	CEL			X						
LEPOCINCLIS ACUTA ?	CEL						X			
LUNATE COLONY	COL									X
MALLOMONAS CAUDATA	CEL									X
MELOSIRA DISTANS	CEL			X		2.5	280		5.4	687
MELOSIRA GRANULATA	CEL			X					0.4	49
MELOSIRA GRANULATA V. ANGUSTISSIMA F. SPIRALIS	CEL			X						
MELOSIRA ITALICA ?	CEL					3.3	361			
MERISMOPEDIA TENUISSIMA	COL					1.1	120		0.4	49
MESOSTIGMA VIRIDIS	CEL								0.4	49
MICROCYSTIS	COL									X
MICROCYSTIS AERUGINOSA	COL						X			
MICROCYSTIS INCERTA	COL					0.4	40			
NITZSCHIA	CEL					0.7	80			
NITZSCHIA #1	CEL									X
NITZSCHIA #2	CEL									X
NITZSCHIA #3	CEL						X		1.5	196
NITZSCHIA TRYBLIONELLA	CEL						X			
OSCILLATORIA	FIL									X
OSCILLATORIA LIMNETICA	FIL					1.1	120			
PEDIASTRUM TETRAS	COL									X
PENNATE	CEL							1	45.6	5789
PENNATES	CEL	5	8.1	118	1	27.3	3004			

ATCHAFALAYA
STORET NUMBER: GC040CO CONTINUEC

TAXA	FORM	11 20 74			12 18 74			12 11 75		
		S	%C	ALGAL UNITS PER ML	S	%C	ALGAL UNITS PER ML	S	%C	ALGAL UNITS PER ML
PERIDINIUM UMBONATUM	CEL	3	2.7	39			X			X
PHACUS LONGICAUDA	CEL						X			
PHACUS ORBICULARIS	CEL						X			
PHACUS PSEUDONORDSTEDTII	CEL									
PHACUS TORTUS	CEL			X						X
RHOPALODIA GIBBA	CEL									X
SCENEDESMUS APICULATUS	COL									X
SCENEDESMUS APICULATUS ?	COL								0.8	98
SCENEDESMUS BIJUGA	COL					0.7	8C		C.8	98
SCENEDESMUS DIMORPHUS	COL									
SCENEDESMUS INTERMEDIUS V. BICALCATUS	COL								1.2	147
SCENEDESMUS PROTUBERANS	CCL			X					0.8	98
SCENEDESMUS QUADRICAUDA	COL					0.7	8C			X
SKELETONEMA POTAMOS	CEL							5	1.5	196
STEPHANODISCUS	CEL			X		2.5	28C			
STEPHANODISCUS NIAGARAE	CEL									X
SURIRELLA #1	CEL						X			
SYNEDRA	CEL								C.8	98
SYNEDRA ULNA	CEL						X			
SYNURA UVELLA	CEL									
TETRAEDRON TRIGONUM V. GRACILE	CEL						X			X
TETRASTRUM GLABRUM	COL			X					1.2	147
TETRASTRUM STAUROGENIAEFORME	COL									X
TRACHELOMONAS FLUVIATILIS	CEL					0.4	40		1.5	196
TRACHELOMONAS INTERMEDIA	CEL						X			
TRACHELOMONAS LACUSTRIS	CEL									
TOTAL				1455			11014			12705

ATCHAFALAYA
STORET NUMBER: HC080C0

NYGAARD TROPHIC STATE INDICES

DATE	11 22 74	12 10 74	01 17 75
MYXOPHYCEAN	3.00 E	4.00 E	05/0 E
CHLOROPHYCEAN	7.00 E	6.00 E	05/0 E
EUGLENOPHYTE	0.20 ?	0.10 ?	0.10 ?
DIATOM	1.00 E	0.67 E	0.89 E
COMPOUND	15.0 E	17.0 E	19/0 E

PALMER'S ORGANIC POLLUTION INDICES

DATE	11 22 74	12 10 74	01 17 75
GENUS	05	09	10
SPECIES	00	04	00

SPECIES DIVERSITY AND ABUNDANCE INDICES

	DATE	11 22 74	12 10 74	01 17 75
AVERAGE DIVERSITY	H	2.84	2.49	3.43
NUMBER OF TAXA	S	24.00	31.00	32.00
NUMBER OF SAMPLES COMPOSITED	M	1.00	1.00	1.00
MAXIMUM DIVERSITY	MAXH	4.58	4.95	5.00
TOTAL DIVERSITY	D	1207.00	1869.99	18950.75
TOTAL NUMBER OF INDIVIDUALS/ML	N	425.00	751.00	5525.00
EVENESS COMPONENT	J	0.62	0.50	0.69
MEAN NUMBER OF INDIVIDUALS/TAXA	L	17.71	24.23	172.66
NUMBER/ML OF MOST ABUNDANT TAXON	K	113.00	278.00	1519.00

ATCHAFALAYA
STORET NUMBER: H008000 CONTINUED

TAXA	FORM	11 22 74			12 10 74			01 17 75		
		S	%C	ALGAL UNITS PER ML	S	%C	ALGAL UNITS PER ML	S	%C	ALGAL UNITS PER ML
ACTINASTRUM HANTZSCHII V. FLUVIATILE	CEL			X			X			
ANABAENA	FIL									
ANKISTRODESMUS FALCATUS V. MIRABILIS	CEL									X
APHANIZOMENON FLOS-AQUAE	FIL			X			X			
ASTERIONELLA FORMOSA	CEL								2.3	127
CHLAMYDOMONAS	CEL							4	7.6	422
CHROOMONAS	CEL		6.6	28	3	18.5	139			
CHROOMONAS SPP.	CEL									
CLOSTERIUM	CEL			X			X			
COCCONEIS	CEL						X			
COCCONEIS PLACENTULA	CEL									X
COSCINODISCUS ROTHII V. SUBSALSA	CEL									X
CRUCIGENIA APICULATA	COL									
CRUCIGENIA FENESTRATA	COL									
CRYPTOMONAS EROSA	CEL	5	6.6	28			X		1.5	84
CRYPTOMONAS MARSSONII	CEL								2.3	127
CRYPTOMONAS REFLEXA	CEL			X			X			
CRYPTOMONAS SPP.	CEL									
CYCLOTELLA	CEL								4.6	253
CYCLOTELLA MENENGHINIANA	CEL						X			X
CYMATOPLEURA	CEL									
CYMBELLA	CEL									X
DACTYLOCOCCOPSIS	CEL	3	26.6	113					4.6	253
DACTYLOCOCCOPSIS IRREGULARIS	CEL					3.7	28			
DIPLONEIS INTERRUPTA ?	CEL									
DIPLONEIS PUELLA	CEL								1.5	84
EPITHEMIA	CEL						X			
EPITHEMIA ?	CEL									
EUGLENA	CEL			X						

ATCHAFALAYA
STORET NUMBER: H008000 CONTINUED

TAXA	FORM	11 22 74			12 10 74			01 17 75		
		S	%C	ALGAL UNITS PER ML	S	%C	ALGAL UNITS PER ML	S	%C	ALGAL UNITS PER ML
EUGLENA ACUS	CEL									
EUGLENA GRACILIS	CEL						X			
FLAGELLATE #1	CEL							3	10.7	591
FLAGELLATE #2	CEL								6.1	337
GLOEOCYSTIS	COL			X						
GLOEOCYSTIS PLANCTONICA	COL					3.7	28			
GOMPHONEMA	CEL						X			
GOMPHONEMA CONSTRICTUM	CEL									
GOMPHONEMA OLIVACEUM	CEL									X
GYROSIGMA	CEL			X						
KIRCHNERIELLA	CEL								1.5	84
MELOSIRA	CEL			X						
MELOSIRA DISTANS	CEL						X		2.3	127
MELOSIRA GRANULATA	CEL						X			X
MELOSIRA GRANULATA V. ANGUSTISSIMA	CEL						X			
MELOSIRA GRANULATA V. ANGUSTISSIMA F. SPIRALIS	CEL									X
MERISMOPEDIA	COL									X
MERISMOPEDIA TENUISSIMA	COL								0.8	42
MICRACTINIUM	COL									X
MICROCYSTIS	COL									X
MICROCYSTIS INCERTA	COL									
NAVICULA #1	CEL						X			
NAVICULA #2	CEL						X			
NAVICULA #3	CEL			X						
NAVICULA CINCTA	CEL									
NAVICULA GASTRUM	CEL								0.8	42
NAVICULA SPP.	CEL									
NITZSCHIA	CEL					3.7	28			
NITZSCHIA #2	CEL									
NITZSCHIA LORENZIANA ?	CEL									

ATCHAFALAYA
STORET NUMBER: HC080CO CONTINUED

TAXA	FORM	11 22 74 S	11 22 74 %C	11 22 74 ALGAL UNITS PER ML	12 10 74 S	12 10 74 %C	12 10 74 ALGAL UNITS PER ML	01 17 75 S	01 17 75 %C	01 17 75 ALGAL UNITS PER ML
NITZSCHIA SPP.	CEL							2	14.5	801
OOCYSTIS	CEL	2	13.4	57			X			
OOCYSTIS PUSILLA	CEL			X						
OSCILLATORIA	FIL						X			
OSCILLATORIA LIMNETICA	FIL		13.4	57	1	37.0	278			
PALMELLOID COLONY	COL									
PEDIASTRUM DUPLEX	COL									
PEDIASTRUM DUPLEX V. CLATHRATUM	COL			X						
PEDIASTRUM SIMPLEX	COL						X			
PERIDINIUM UMBONATUM	CEL			X						
PHACUS CURVICAUDA	CEL			X						
PHORMIDIUM	FIL							1	27.5	1519
PINNULARIA ?	CEL						X			
PINNULARIA GIBBA	CEL									
PTEROMONAS	CEL									
RAPHIDIOPSIS	FIL									
SCENEDESMUS ABUNDANS	COL									
SCENEDESMUS BICAUDATUS	COL									
SCENEDESMUS BIJUGA	COL		6.6	28						
SCENEDESMUS DENTICULATUS	COL						X			
SCENEDESMUS DIMORPHUS	COL			X						
SCENEDESMUS PROTUBERANS	COL						X			
SCENEDESMUS QUADRICAUDA	COL			X	4	11.1	83		0.8	42
SCHROEDERIA SETIGERA	CEL									
SKELETONEMA POTAMOS	CEL	4	13.4	57	2	18.5	139	5	9.2	506
STEPHANODISCUS	CEL								0.8	42
STEPHANODISCUS ASTRAEA	CEL	1	13.4	57						
STEPHANODISCUS NIAGARAE	CEL				5	3.7	28			
SURIRELLA	CEL						X			
SYNEDRA ULNA	CEL			X			X			
SYNEDRA ULNA V. OXYRHYNCHUS	CEL									X

ATCHAFALAYA
STORET NUMBER: H008000 CONTINUED

TAXA	FORM	11 22 74			12 10 74			01 17 75		
		S	%C	ALGAL UNITS PER ML	S	%C	ALGAL UNITS PER ML	S	%C	ALGAL UNITS PER ML
SYNURA ?	CEL									
TETRAEDRON MINIMUM	CEL									
TETRASTRUM ELEGANS	COL									
TETRASTRUM STAUROGENIAEFORME	COL									X
TRACHELOMONAS INTERMEDIA	CEL								0.8	42
TOTAL				425			751			5525

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                    ATCHAFALAYA
          STORET NUMBER: H008000      CONTINUEC

                                           NYGAARD TRCPHIC STATE INCICES

                                      CATE   12 11 75

                              MYXOPHYCEAN    07/0 E
                            CHLOROPHYCEAN    16/0 E
                             EUGLENOPHYTE    0.09 ?
                                   DIATOM    0.69 E
                                 COMPCUNC    34/0 E


                                           PALMER'S ORGANIC POLLUTICN INDICES

                                      CATE   12 11 75

                                    GENUS         24
                                  SPECIES         07


                                           SPECIES DIVERSITY AND ABUNDANCE INDICES

                                      CATE   12 11 75

                   AVERAGE DIVERSITY     H        3.88
                      NUMBER CF TAXA     S       56.00
         NUMBER OF SAMPLES COMPOSITED    M        1.00
                   MAXIMUM DIVERSITY  MAXH        5.81
                     TOTAL DIVERSITY     D    64450.68
       TOTAL NUMBER OF INDIVIDUALS/ML    N    16611.00
                   EVENESS COMPCNENT     J        0.67
      MEAN NUMBER CF INDIVIDUALS/TAXA    L      296.63
      NUMBER/ML OF MOST ABUNDANT TAXON   K     2929.00
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ATCHAFALAYA
STORET NUMBER: H008000 CONTINUED

TAXA	FORM	S	%C	12 11 75 ALGAL UNITS PER ML
ACTINASTRUM HANTZSCHII V. FLUVIATILE	CEL			
ANABAENA	FIL			X
ANKISTRODESMUS FALCATUS V. MIRABILIS	CEL		2.9	481
APHANIZOMENON FLOS-AQUAE	FIL		0.8	131
ASTERIONELLA FORMOSA	CEL			X
CHLAMYDOMONAS	CEL		2.1	350
CHROOMONAS	CEL			
CHROOMONAS SPP.	CEL	1	17.6	2929
CLOSTERIUM	CEL			
COCCONEIS	CEL			
COCCONEIS PLACENTULA	CEL		2.1	350
COSCINODISCUS ROTHII V. SUBSALSA	CEL			X
CRUCIGENIA APICULATA	COL		0.3	44
CRUCIGENIA FENESTRATA	COL		2.1	350
CRYPTOMONAS EROSA	CEL			X
CRYPTOMONAS MARSSONII	CEL		0.8	131
CRYPTOMONAS REFLEXA	CEL			
CRYPTOMONAS SPP.	CEL	5	2.9	481
CYCLOTELLA	CEL			
CYCLOTELLA MENENGHINIANA	CEL		3.7	612
CYMATOPLEURA	CEL			X
CYMBELLA	CEL			X
DACTYLOCOCCOPSIS	CEL		8.2	1355
DACTYLOCOCCOPSIS IRREGULARIS	CEL			
DIPLONEIS INTERRUPTA ?	CEL			X
DIPLONEIS PUELLA	CEL			
EPITHEMIA	CEL			
EPITHEMIA ?	CEL			X
EUGLENA	CEL			

ATCHAFALAYA
STORET NUMBER: H008000 CONTINUED

TAXA	FORM	S	%C	12 11 75 ALGAL UNITS PER ML
EUGLENA ACUS	CEL			X
EUGLENA GRACILIS	CEL			
FLAGELLATE #1	CEL			
FLAGELLATE #2	CEL			
GLOEOCYSTIS	COL			
GLOEOCYSTIS PLANCTONICA	COL			
GOMPHONEMA	CEL			
GOMPHONEMA CONSTRICTUM	CEL			X
GOMPHONEMA OLIVACEUM	CEL			
GYROSIGMA	CEL			X
KIRCHNERIELLA	CEL		0.3	44
MELOSIRA	CEL			
MELOSIRA DISTANS	CEL	2	13.2	2185
MELOSIRA GRANULATA	CEL		2.6	437
MELOSIRA GRANULATA V. ANGUSTISSIMA	CEL			X
MELOSIRA GRANULATA V. ANGUSTISSIMA F. SPIRALIS	CEL		0.5	87
MERISMOPEDIA	COL			
MERISMOPEDIA TENUISSIMA	COL		1.6	262
MICRACTINIUM	COL			
MICROCYSTIS	COL			
MICROCYSTIS INCERTA	COL		0.8	131
NAVICULA #1	CEL			
NAVICULA #2	CEL			
NAVICULA #3	CEL			
NAVICULA CINCTA	CEL			X
NAVICULA GASTRUM	CEL			
NAVICULA SPP.	CEL		3.2	525
NITZSCHIA	CEL			
NITZSCHIA #2	CEL			X
NITZSCHIA LORENZIANA ?	CEL			X

ATCHAFALAYA
STORET NUMBER: HC08000 CONTINUED

TAXA	FORM	S	%C	12 11 75 ALGAL UNITS PER ML
NITZSCHIA SPP.	CEL	4	16.3	2710
OOCYSTIS	CEL			X
OOCYSTIS PUSILLA	CEL			
CSCILLATCRIA	FIL	3	9.7	1617
OSCILLATORIA LIMNETICA	FIL			
PALMELLCID COLONY	COL			X
PECIASTRLM CUPLEX	COL			X
PECIASTRLM DUPLEX V. CLATHRATUM	COL			
PEDIASTRUM SIMPLEX	COL			X
PERIDINIUM UMBONATUM	CEL			
PHACLS CURVICAUCA	CEL			
PHCRMIDIUM	FIL			
PINNULARIA ?	CEL			
PINNULARIA GIBBA	CEL			X
PTEROMONAS	CEL		1.1	175
RAPHIDIOPSIS	FIL		2.6	437
SCENEDESMUS ABUNCANS	COL			X
SCENEDESMUS BICALCATUS	COL			X
SCENEDESMUS BIJUGA	CCL		1.1	175
SCENEDESMUS DENTICULATUS	COL			
SCENEDESMUS DIMORPHUS	COL		0.5	87
SCENEDESMUS PROTUBERANS	COL			
SCENEDESMUS QUACRICAUDA	COL		0.5	87
SCHROEDERIA SETIGERA	CEL			X
SKELETCNEMA POTAMOS	CEL		1.6	262
STEPHANCDISCUS	CEL		0.3	44
STEPHANCDISCUS ASTRAEA	CEL			X
STEPHANCDISCUS NIAGARAE	CEL			
SURIRELLA	CEL			
SYNEDRA ULNA	CEL			
SYNEDRA ULNA V. OXYRHYNCHUS	CEL			

ATCHAFALAYA
STORET NUMBER: H008000 CONTINUED

TAXA	FORM	S	%C	12 11 75 ALGAL UNITS PER ML
SYNURA ?	CEL			X
TETRAECRCN MINIMUM	CEL			X
TETRASTRUM ELEGANS	CCL		0.3	44
TETRASTRUM STAUROGENIAEFORME	COL		0.3	44
TRACHELOMCNAS INTERMEDIA	CEL		0.3	44
TOTAL				16611

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                 ATCHAFALAYA
          STORET NUMBER: H013000

                                   NYGAARD TROPHIC STATE INDICES

                           DATE     11 22 74    12 10 74    01 17 75

                    MYXOPHYCEAN     4.00 E      2.00 E      4.00 E
                  CHLOROPHYCEAN     11.0 E      6.40 E      7.50 E
                   EUGLENOPHYTE     0.18 ?      0.12 ?      0.09 ?
                         DIATOM     1.20 E      0.40 E      0.70 E
                       COMPOUND     19.6 E      11.0 E      16.0 E


                                   PALMER'S ORGANIC POLLUTION INDICES

                           DATE     11 22 74    12 10 74    01 17 75

                          GENUS           14          26          20
                        SPECIES           07          07          07


                                  SPECIES DIVERSITY AND ABUNDANCE INDICES

                                  DATE    11 22 74    12 10 74    01 17 75

               AVERAGE DIVERSITY     H        1.73        4.06        3.46
                  NUMBER OF TAXA     S       72.00       94.00       38.00
     NUMBER OF SAMPLES COMPOSITED    M        1.00        1.00        1.00
               MAXIMUM DIVERSITY  MAXH        6.17        6.55        5.25
                 TOTAL DIVERSITY     D   231122.81   194522.72    18334.54
   TOTAL NUMBER OF INDIVIDUALS/ML    N   133597.00    47912.00     5255.00
              EVENESS COMPONENT      J        0.28        0.62        0.66
  MEAN NUMBER OF INDIVIDUALS/TAXA    L     1855.51      509.70      135.45
 NUMBER/ML OF MOST ABUNDANT TAXON    K   103507.00    10483.00     1635.00
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ATCHAFALAYA
STORET NUMBER: H013000 CONTINUED

TAXA	FORM	11 22 74 S	11 22 74 %C	11 22 74 ALGAL UNITS PER ML	12 10 74 S	12 10 74 %C	12 10 74 ALGAL UNITS PER ML	01 17 75 S	01 17 75 %C	01 17 75 ALGAL UNITS PER ML
ACTINASTRUM	COL					0.1	28			
ACTINASTRUM HANTZSCHII V. FLUVIATILE	CEL			X						
AMPHORA	CEL					0.1	28			
ANABAENA	FIL			X						
ANABAENOPSIS CIRCULARIS	FIL		0.4	570			X			X
ANABAENOPSIS RACIBORSKII	FIL		0.2	285						
ANKISTRODESMUS FALCATUS	CEL		0.3	428		1.3	609		1.0	52
ANKISTRODESMUS FALCATUS V. MIRABILIS	CEL		1.3	1711	4	6.7	3209		1.0	53
APHANIZOMENON GRACILE ?	FIL		0.4	570						
APHANOTHECE NIDULANS	COL						X			
CARTERIA	CEL					0.2	111			X
CENTRIC DIATOM	CEL	3	1.6	2139						
CHAETOCEROS ?	CEL		0.1	143						
CHAETOCEROS ELMOREI	CEL						X			
CHLAMYDOMONAS GLOBOSA	CEL								3.5	185
CHLORELLA	CEL						X			
CHLOROGONIUM	CEL						X			
CHLOROGONIUM ELONGATUM	CEL			X						X
CHROOMONAS #1	CEL		0.9	1141						
CHROOMONAS #2	CEL	2	1.9	2566						
CLOSTERIUM	CEL		0.1	143		0.3	166			X
COCCONEIS PLACENTULA	CEL					0.5	221			X
COELASTRUM ?	COL						X			
COSMARIUM	CEL			X						
CRUCIGENIA FENESTRATA	COL					0.1	55			
CRUCIGENIA TETRAPEDIA	COL		0.1	143					0.5	26
CRYPTOMONAS	CEL							3	8.0	422
CRYPTOMONAS EROSA	CEL					1.4	664			
CRYPTOMONAS MARSSONII	CEL					1.0	470			
CYANOPHYTAN FILAMENT	FIL	1	77.5	103507						

ATCHAFALAYA
STORET NUMBER: HO13000 CONTINUED

TAXA	FORM	11 22 74			12 10 74			01 17 75		
		S	%C	ALGAL UNITS PER ML	S	%C	ALGAL UNITS PER ML	S	%C	ALGAL UNITS PER ML
CYCLOTELLA MENENGHINIANA	CEL		0.4	570		1.6	774		4.0	211
CYMBELLA VENTRICOSA	CEL					0.1	55			
DACTYLOCOCCOPSIS	CEL	4	5.5	7414		4.7	2240		1.5	79
DICTYOSPHAERIUM	COL					0.8	360			
DICTYOSPHAERIUM PULCHELLUM	COL		0.5	713						X
DINOFLAGELLATE CYST	CEL						X			
DIPLONEIS SMITHII	CEL						X			
EPITHEMIA TURGIDA	CEL						X			
EUASTRUM	CEL					0.1	28			
EUGLENA	CEL			X						X
EUGLENA #1	CEL						X			
EUGLENA #2	CEL						X			
EUGLENA ACUS	CEL						X			
EUGLENA SPP.	CEL					0.2	83			
EUNOTIA PECTINALIS V. MINOR	CEL						X			
FLAGELLATE #1	CEL				3	8.9	4287	1	30.9	1635
FLAGELLATE #2	CEL					1.5	719			
FLAGELLATE #5	CEL					0.1	28			
FRAGILARIA CONSTRUENS	CEL						X			
FRAGILARIA CONSTRUENS V. SUBSALINA	CEL						X			
GOLENKINIA	CEL		0.5	713						
GOLENKINIA RADIATA	CEL					0.3	166			
GOMPHONEMA ANGUSTATUM V. PRODUCTA	CEL						X			
GOMPHONEMA PARVULUM	CEL						X		0.5	26
GOMPHONEMA SPP.	CEL					0.1	28			
GYMNODINIUM ORDINATUM	CEL		0.1	143						
GYROSIGMA MACRUM	CEL			X						
KIRCHNERIELLA	CEL					1.7	830			
KIRCHNERIELLA LUNARIS	CEL						X			

ATCHAFALAYA
STCRET NUMBER: HC13CCO CONTINUED

TAXA	FORM	11 22 74			12 10 74			01 17 75		
		S	%C	ALGAL UNITS PER ML	S	%C	ALGAL UNITS PER ML	S	%C	ALGAL UNITS PER ML
LAGERHEIMIA SUBSALSA	CEL					0.1	28			
LEPOCINCLIS	CEL			X		0.1	55			
LYNGBYA	FIL			X						X
LYNGBYA LAGERHEIMII	FIL				2	21.9	10483			
MELOSIRA DISTANS	CEL			X		3.5	1687		3.0	158
MELCSIRA GRANULATA	CEL						X		1.5	79
MELOSIRA GRANULATA V. ANGLSTISSIMA	CEL			X		0.8	387			X
MELCSIRA GRANULATA V. ANGLSTISSIMA F. SPIRALIS	CEL						X			
MERISMCPECIA GLAUCA	COL					0.6	277			
MERISMOPEDIA MINIMA	COL					0.6	277			
MERISMOPEDIA PUNCTATA	COL		0.3	428						
MERISMCPEDIA TENUISSIMA	COL		0.5	713		2.8	1355		0.5	26
MICRACTINIUM	COL					0.1	28			
MICROCYSTIS	COL						X			
MICROCYSTIS INCERTA	COL		0.1	143	5	4.3	2C47			X
NAVICULA	CEL								0.5	26
NAVICULA CUSPIDATA ?	CEL						X			
NITZSCHIA	CEL			X						
NITZSCHIA ?	CEL						X			
NITZSCHIA #1	CEL						X	5	9.5	501
NITZSCHIA #2	CEL								2.0	106
NITZSCHIA FILIFCRMIS	CEL					0.1	55			
NITZSCHIA HANTZSCHIANA	CEL						X			
NITZSCHIA HOLSATICA	COL					0.1	28			
NITZSCHIA SPP.	CEL					1.9	513			
OOCYSTIS	CEL		0.2	285						
OPHIOCYTIUM CAPITATUM V. LONGISPINUM	CEL		0.1	143						
OSCILLATORIA	FIL		0.1	143	1	20.2	9681			X
OSCILLATORIA LIMNETICA	FIL								4.5	237

ATCHAFALAYA
STORET NUMBER: H013000 CONTINUED

TAXA	FORM	11 22 74			12 10 74			01 17 75		
		S	%C	ALGAL UNITS PER ML	S	%C	ALGAL UNITS PER ML	S	%C	ALGAL UNITS PER ML
PEDIASTRUM BIRADIATUM V. LONGECORNUTUM	COL			X						
PEDIASTRUM DUPLEX	COL						X			
PEDIASTRUM DUPLEX V. CLATHRATUM	COL					0.2	83			
PEDIASTRUM DUPLEX V. RETICULATUM	CCL		0.1	143						X
PEDIASTRUM SIMPLEX	COL			X		0.1	28			
PEDIASTRUM SIMPLEX V. DUODENARIUM	COL			X						X
PEDIASTRUM TETRAS	COL			X						
PEDIASTRUM TETRAS V. TETRAODON	CCL			X		0.1	28			X
PENNATE #1	CEL		0.4	570						
PENNATE #2	CEL		0.1	143						
PENNATE #3	CEL			X						
PHACUS PYRUM	CEL			X						
PINNULARIA GENTILIS	CEL						X			
PTEROMONAS	CEL					0.1	55			
RAPHIDIOPSIS CURVATA	FIL	5	1.6	2139						
RHOPALODIA GIBBA	CEL						X			
SCENEDESMUS ABUNDANS	COL		0.3	428		2.1	556			
SCENEDESMUS ACUMINATUS	CCL		0.2	285						
SCENEDESMUS ACUTUS	COL						X			
SCENEDESMUS ANOMALUS	COL			X						
SCENEDESMUS ARMATUS	CCL		0.1	143						
SCENEDESMUS ARMATUS V. BICAUDATUS	COL			X						
SCENEDESMUS ARMATUS V. BOGLARIENSIS F. BICAUDATUS	COL						X			
SCENEDESMUS BICAUDATUS	CCL					0.2	111			
SCENEDESMUS BIJUGA	COL			X		0.7	331			

ATCHAFALAYA
STORET NUMBER: H013000 CONTINUED

TAXA	FORM	11 22 74 S	11 22 74 %C	11 22 74 ALGAL UNITS PER ML	12 10 74 S	12 10 74 %C	12 10 74 ALGAL UNITS PER ML	01 17 75 S	01 17 75 %C	01 17 75 ALGAL UNITS PER ML
SCENEDESMUS BRASILIENSIS	COL					0.2	83			
SCENEDESMUS DENTICULATUS V. LINEARIS	COL						X			
SCENEDESMUS DIMORPHUS	COL		0.5	713		1.3	609			X
SCENEDESMUS OPOLIENSIS	COL			X						
SCENEDESMUS OVALTERNUS	COL			X						
SCENEDESMUS PROTUBERANS	COL					0.9	443			
SCENEDESMUS QUADRICAUDA	COL		1.6	2139		1.2	553		2.5	132
SCHROEDERIA SETIGERA	CEL		0.2	285						
SKELETONEMA POTAMOS	CEL		0.3	428		1.3	605	2	13.9	739
SPERMATOZOOPSIS	CEL					0.6	277			
STAURASTRUM #1	CEL					0.1	28			
STAURASTRUM #2	CEL					0.1	28			
STAURASTRUM CUSPIDATUM ?	CEL					0.1	28			
STAURASTRUM TETRACERUM	CEL		0.1	143						
STEPHANODISCUS	CEL								0.5	343
STEPHANODISCUS ASTRAEA	CEL						X	4	4.0	211
SYNEDRA ACUS	CEL						X			
SYNEDRA SPP.	CEL					1.2	553			
SYNEDRA ULNA V. OXYRHYNCHUS	CEL						X			
TETRAEDRON	CEL			X						
TETRAEDRON CAUDATUM V. LONGISPINUM	CEL		0.1	143			X			
TETRAEDRON GRACILE	CEL						X			
TETRAEDRON MINIMUM	CEL					0.2	111			X
TETRAEDRON MINIMUM V. SCROBICULATUM	CEL		0.3	428						
TETRAEDRON MUTICUM	CEL					0.1	28		0.5	2C
TETRAEDRON MUTICUM F. PUNCTULATUM	CEL			X						
TETRAEDRON PENTAEDRICUM	CEL			X						

ATCHAFALAYA
STORET NUMBER: H013000 CONTINUED

TAXA	FORM	11 22 74 S	11 22 74 %C	11 22 74 ALGAL UNITS PER ML	12 10 74 S	12 10 74 %C	12 10 74 ALGAL UNITS PER ML	01 17 75 S	01 17 75 %C	01 17 75 ALGAL UNITS PER ML
TETRAEDRON REGULARE V. INCUS	CEL			X						
TETRASTRUM ELEGANS	COL		0.1	143			X			
TETRASTRUM HETERACANTHUM	COL			X						
TETRASTRUM STAUROGENIAEFORME	COL			X		0.8	387		0.5	26
TRACHELOMONAS CYLINDRICA	CEL		0.2	285						
TRACHELOMONAS INTERMEDIA	CEL			X		0.2	83			
TRACHELOMONAS OBLONGA ?	CEL			X						
TRACHELOMONAS PLAYFAIRII	CEL			X						
TRACHELOMONAS VOLVOCINA	CEL		0.2	285						
TOTAL				133597			47912			5299

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            ATCHAFALAYA
  STCRET NUMBER: HC13000        CONTINUEC

                                          NYGAARD TROPHIC STATE INCICES

                                  CATE    12 11 75

                           MYXOPHYCEAN    2.75 E
                         CHLCROPHYCEAN    5.25 E
                          EUGLENCPHYTE    0.03 ?
                                DIATOM    1.00 E
                              COMPCUND    10.7 E

                                          PALMER'S ORGANIC POLLUTICN INDICES

                                  CATE    12 11 75

                                 GENUS          20
                               SPECIES          07

                                          SPECIES DIVERSITY AND ABUNDANCE INDICES

                                  DATE    12 11 75

                   AVERAGE DIVERSITY    H       3.78
                     NUMBER CF TAXA     S      33.00
         NUMBER OF SAMPLES COMPOSITED   M       1.00
                   MAXIMUM DIVERSITY MAXH       5.04
                     TOTAL DIVERSITY    D   52504.20
      TOTAL NUMBER CF INDIVIDUALS/ML    N   13890.00
                   EVENESS COMPCNENT    J       0.75
       MEAN NUMBER OF INDIVIDUALS/TAXA  L     420.91
      NUMBER/ML CF MOST ABUNDANT TAXON  K    2685.00
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ATCHAFALAYA
STORET NUMBER: H013000 CONTINUED

TAXA	FORM	12 11 75		
		S	%C	ALGAL UNITS PER ML
ACTINASTRUM	COL			
ACTINASTRUM HANTZSCHII V. FLUVIATILE	CEL			
AMPHORA	CEL			
ANABAENA	FIL			
ANABAENOPSIS CIRCULARIS	FIL			
ANABAENOPSIS RACIBORSKII	FIL			
ANKISTRODESMUS FALCATUS	CEL		6.7	934
ANKISTRODESMUS FALCATUS V. MIRABILIS	CEL			
APHANIZOMENON GRACILE ?	FIL			
APHANOTHECE NIDULANS	COL			
CARTERIA	CEL			
CENTRIC DIATOM	CEL	3	12.2	1693
CHAETOCEROS ?	CEL			
CHAETOCEROS ELMOREI	CEL			
CHLAMYDOMONAS GLOBOSA	CEL			
CHLORELLA	CEL			
CHLOROGONIUM	CEL			
CHLOROGONIUM ELONGATUM	CEL			
CHROOMONAS #1	CEL			
CHROOMONAS #2	CEL			
CLOSTERIUM	CEL			X
COCCONEIS PLACENTULA	CEL			
COELASTRUM ?	COL			
COSMARIUM	CEL		0.4	58
CRUCIGENIA FENESTRATA	COL		1.3	175
CRUCIGENIA TETRAPEDIA	COL		0.8	117
CRYPTOMONAS	CEL		7.1	992
CRYPTOMONAS EROSA	CEL			
CRYPTOMONAS MARSSONII	CEL			
CYANOPHYTAN FILAMENT	FIL			

ATCHAFALAYA
STORET NUMBER: HC13000 CONTINUED

TAXA	FORM	S	%C	12 11 75 ALGAL UNITS PER ML
CYCLOTELLA MENENGHINIANA	CEL			X
CYMBELLA VENTRICOSA	CEL			
DACTYLOCOCCOPSIS	CEL		2.9	409
DICTYOSPHAERIUM	COL			
DICTYOSPHAERIUM PULCHELLUM	COL			
DINOFLAGELLATE CYST	CEL			
DIPLONEIS SMITHII	CEL			
EPITHEMIA TURGIDA	CEL			
EUASTRUM	CEL			
EUGLENA	CEL			
EUGLENA #1	CEL			
EUGLENA #2	CEL			
EUGLENA ACUS	CEL			
EUGLENA SPP.	CEL			
EUNOTIA PECTINALIS V. MINOR	CEL			
FLAGELLATE #1	CEL		6.7	934
FLAGELLATE #2	CEL			
FLAGELLATE #5	CEL			
FRAGILARIA CONSTRUENS	CEL			
FRAGILARIA CONSTRUENS V. SUBSALINA	CEL			
GOLENKINIA	CEL			
GOLENKINIA RADIATA	CEL			
GOMPHONEMA ANGUSTATUM V. PRODUCTA	CEL			
GOMPHONEMA PARVULUM	CEL			
GOMPHONEMA SPP.	CEL			
GYMNODINIUM ORDINATUM	CEL			
GYROSIGMA MACRUM	CEL			
KIRCHNERIELLA	CEL			
KIRCHNERIELLA LUNARIS	CEL			

ATCHAFALAYA
STORET NUMBER: H013000 CONTINUED

TAXA	FORM	S	%C	12 11 75 ALGAL UNITS PER ML
LAGERHEIMIA SUBSALSA	CEL			
LEPOCINCLIS	CEL			X
LYNGBYA	FIL		0.8	117
LYNGBYA LAGERHEIMII	FIL	2	15.5	2159
MELOSIRA DISTANS	CEL			X
MELOSIRA GRANULATA	CEL			
MELOSIRA GRANULATA V. ANGUSTISSIMA	CEL		1.7	233
MELOSIRA GRANULATA V. ANGUSTISSIMA F. SPIRALIS	CEL		0.4	58
MERISMOPEDIA GLAUCA	COL			
MERISMOPEDIA MINIMA	COL			
MERISMOPEDIA PUNCTATA	COL		3.4	467
MERISMOPEDIA TENUISSIMA	COL			
MICRACTINIUM	COL			
MICROCYSTIS	COL		1.3	175
MICROCYSTIS INCERTA	COL			
NAVICULA	CEL			
NAVICULA CUSPIDATA ?	CEL	4	19.3	2685
NITZSCHIA	CEL			
NITZSCHIA ?	CEL			
NITZSCHIA #1	CEL			
NITZSCHIA #2	CEL			
NITZSCHIA FILIFORMIS	CEL			
NITZSCHIA HANTZSCHIANA	CEL			
NITZSCHIA HOLSATICA	COL			
NITZSCHIA SPP.	CEL			
OOCYSTIS	CEL			
OPHIOCYTIUM CAPITATUM V. LONGISPINUM	CEL			
OSCILLATORIA	FIL			
OSCILLATORIA LIMNETICA	FIL			X

ATCHAFALAYA
STORET NUMBER: HG13000 CONTINUEC

TAXA	FORM	S	%C	12 11 75 ALGAL UNITS PER ML
PECIASTRUM BIRADIATUM V. LONGECORNUTUM	COL			
PECIASTRUM DUPLEX	COL			X
PECIASTRUM DUPLEX V. CLATHRATUM	COL			
PECIASTRUM DUPLEX V. RETICULATUM	COL			
PECIASTRUM SIMPLEX	CCL			X
PECIASTRUM SIMPLEX V. DUODENARIUM	COL			
PECIASTRUM TETRAS	COL			
PECIASTRUM TETRAS V. TETRACCON	COL		0.4	58
PENNATE #1	CEL			
PENNATE #2	CEL			
PENNATE #3	CEL			
PHACUS PYRUM	CEL			
PINNULARIA GENTILIS	CEL			
PTEROMONAS	CEL			
RAPHIDIOPSIS CURVATA	FIL			
RHOPALODIA GIBBA	CEL			
SCENEDESMUS ABUNDANS	CCL		2.5	350
SCENEDESMUS ACUMINATUS	COL			
SCENEDESMUS ACUTUS	CCL			
SCENEDESMUS ANOMALUS	COL			
SCENEDESMUS ARMATUS	CCL			
SCENEDESMUS ARMATUS V. BICAUDATUS	COL			
SCENEDESMUS ARMATUS V. BOGLARIENSIS F. BICAUDATUS	CCL			
SCENEDESMUS BICAUDATUS	COL			
SCENEDESMUS BIJUGA	CCL			

ATCHAFALAYA
STORET NUMBER: MC13000 CONTINUED

TAXA	FORM	S	%C	12 11 75 ALGAL UNITS PER ML
SCENEDESMUS BRASILIENSIS	COL			
SCENEDESMUS DENTICULATUS V. LINEARIS	COL			
SCENEDESMUS DIMORPHUS	COL		2.9	409
SCENEDESMUS OPOLIENSIS	COL		5.0	700
SCENEDESMUS OVALTERNUS	COL			
SCENEDESMUS PROTUBERANS	COL			
SCENEDESMUS QUADRICAUDA	COL		5.0	700
SCHROEDERIA SETIGERA	CEL			
SKELETONEMA POTAMOS	CEL		1.3	175
SPERMATOZOOPSIS	CEL			
STAURASTRUM #1	CEL			
STAURASTRUM #2	CEL			
STAURASTRUM CUSPIDATUM ?	CEL			
STAURASTRUM TETRACERUM	CEL			
STEPHANODISCUS	CEL			X
STEPHANODISCUS ASTRAEA	CEL			
SYNEDRA ACUS	CEL			
SYNEDRA SPP.	CEL			
SYNEDRA ULNA V. OXYRHYNCHUS	CEL			
TETRAEDRON	CEL			
TETRAEDRON CAUDATUM V. LONGISPINUM	CEL			
TETRAEDRON GRACILE	CEL			
TETRAEDRON MINIMUM	CEL			
TETRAEDRON MINIMUM V. SCROBICULATUM	CEL		0.8	117
TETRAEDRON MUTICUM	CEL			
TETRAEDRON MUTICUM F. PUNCTULATUM	CEL			
TETRAEDRON PENTAEDRICUM	CEL			

ATCHAFALAYA
STCRET NUMBER: HC13000 CONTINUEC

TAXA	FORM	12 11 75		
		S	%C	ALGAL UNITS PER ML
TETRAECRCN REGULARE				
V. INCLS	CEL			
TETRASTRUM ELEGANS	COL			X
TETRASTRUM HETERACANTHUM	COL		0.4	58
TETRASTRUM STAUROGENIAEFORME	CCL		0.8	117
TRACHELOMONAS CYLINDRICA	CEL			
TRACHELCMCNAS INTERMEDIA	CEL			
TRACHELCMCNAS OBLONGA ?	CEL			
TRACHELOMCNAS PLAYFAIRII	CEL			
TRACHELCMCNAS VCLVCCINA	CEL			
TOTAL				13890

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LAKE NAME: VERRET
STORET NUMBER: 2216

                              NYGAARD TROPHIC STATE INDICES

                         DATE   03 20 74  05 29 74  08 21 74

                  MYXOPHYCEAN    03/0 F    11.0 E    10.0 E
                CHLOROPHYCEAN    05/0 F    21.0 E    20.0 E
                 EUGLENOPHYTE    0.25 E    0.16 ?    0.27 E
                       DIATCM    1.50 E    0.67 E    1.00 E
                     COMPOUND    13/0 E    41.0 E    43.0 E


                             PALMER'S ORGANIC POLLUTION INDICES

                         DATE   03 20 74  05 29 74  08 21 74

                        GENLS         14        24        25
                      SPECIES         03        08        04


                           SPECIES DIVERSITY AND ABUNDANCE INDICES

                         DATE   03 20 74  05 29 74  08 21 74

            AVERAGE DIVERSITY    H      2.77      1.89      2.62
               NUMBER OF TAXA    S     18.00     54.00     59.00
  NUMBER OF SAMPLES COMPOSITED   M      4.00      3.00      4.00
            MAXIMUM DIVERSITY MAXH      4.17      5.75      5.88
              TOTAL DIVERSITY    D  26079.55 253677.69 329098.20
  TOTAL NUMBER OF INDIVIDUALS/ML N   9415.00 134221.00 125610.00
            EVENESS COMPONENT    J      0.66      0.33      0.45
 MEAN NUMBER OF INDIVIDUALS/TAXA L    523.06   2485.57   2128.98
NUMBER/ML OF MOST ABUNDANT TAXON K   3772.00  93324.00  68499.00
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LAKE NAME: VERRET
STORET NUMBER: 2216

CONTINUED

TAXA	FORM	03 20 74 S	03 20 74 %C	03 20 74 ALGAL UNITS PER ML	05 29 74 S	05 29 74 %C	05 29 74 ALGAL UNITS PER ML	08 21 74 S	08 21 74 %C	08 21 74 ALGAL UNITS PER ML
ANABAENA	CEL					0.2	266			
ANABAENA #1	FIL						X	3	0.9	1139
ANABAENOPSIS	FIL								0.1	163
ANABAENOPSIS CIRCULARIS	FIL							5	1.4	1790
ANABAENOPSIS ELENKINII	FIL					0.2	266			
ANABAENOPSIS PHILIPPINENSIS	FIL								2.3	2929
ANABAENOPSIS RACIBORSKII	FIL				3	3.3	4436			
ANKISTRODESMUS FALCATUS	CEL	3	15.2	1429		1.7	2306			X
APHANIZOMENON FLOS-AQUAE	FIL				5	1.3	1686			
CARTERIA CORDIFORMIS	CEL								0.3	325
CENTRIC DIATOM	CEL					1.5	2040		2.5	3091
CHLAMYDOMONAS #1	CEL									X
CHLAMYDOMONAS CIENKOWSKII	CEL								0.5	651
CHLOROGONIUM	CEL					0.3	355		0.4	488
CLOSTERIDIUM ?	CEL					0.1	89			
COELASTRUM CAMBRICUM V. INTERMEDIUM	COL								0.4	488
COELASTRUM SPHAERICUM	COL					0.1	89			
COSMARIUM	CEL									X
CRUCIGENIA	COL									X
CRUCIGENIA TETRAPEDIA	COL								0.4	488
CRYPTOMONAS	CEL					0.3	444			
CRYPTOMONAS EROSA	CEL		1.2	110					0.6	814
CYCLOTELLA	CEL		2.3	220			X			X
CYLINDROSPERMUM ?	FIL								0.5	651
DACTYLOCOCCOPSIS IRREGULARIS	CEL				2	13.2	17742			
EUASTRUM DENTICULATUM	CEL						X			
EUGLENA	CEL		0.8	73		0.1	177			X
EUGLENA ACUS	CEL								0.3	325
FLAGELLATE #1	CEL					0.7	976			
FLAGELLATE #9	CEL								0.1	163
FLAGELLATES	CEL	2	16.7	1575						

LAKE NAME: VERRET
STORET NUMBER: 2216

CONTINUED

		03 20 74			05 29 74			08 21 74		
TAXA	FORM	S	%C	ALGAL UNITS PER ML	S	%C	ALGAL UNITS PER ML	S	%C	ALGAL UNITS PER ML
FRANCEIA OVALIS	CEL						X			X
GLENODINIUM GYMNODINIUM	CEL						X			
GLENODINIUM GYMNODINIUM V. BISCUTELLIFORME	CEL									X
GOLENKINIA	CEL					0.1	89			
GYMNODINIUM ORDINATUM	CEL								0.1	163
GYROSIGMA	CEL						X			
KIRCHNERIELLA	CEL								1.0	1302
LYNGBYA CIRCULARIS	FIL						X			
LYNGBYA LIMNETICA	FIL	5	3.9	366	4	1.5	1952	2	16.2	20338
MELOSIRA #4	CEL		0.8	73						
MELOSIRA DISTANS	CEL		0.8	73					0.5	651
MELOSIRA GRANULATA	CEL									X
MELOSIRA GRANULATA V. ANGUSTISSIMA F. SPIRALIS	CEL					0.2	266			
MERISMOPEDIA TENUISSIMA	COL		4.7	440		0.7	976		1.8	2278
MICRACTINIUM	COL									X
MICROCYSTIS	COL								0.6	814
MICROCYSTIS INCERTA	COL		1.2	110		0.1	177			
NAVICULA	CEL					0.1	89		1.2	1464
NAVICULA CASCADENSIS	CEL						X			
NEPHROCYTIUM	COL					0.3	355			
NITZSCHIA	CEL					1.9	2573			
NITZSCHIA ACICULARIS	CEL					0.5	710			
NITZSCHIA HOLSATICA	CEL									X
NITZSCHIA PALEA	CEL									X
OSCILLATORIA	FIL				1	69.5	93324			
OSCILLATORIA GEMINATA ?	FIL							1	54.5	68499
PANDORINA MORUM	COL						X			
PEDIASTRUM DUPLEX V. RETICULATUM	COL						X			
PEDIASTRUM SIMPLEX V. DUODENARIUM	COL						X			

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CONTINUED

TAXA	FORM	03 20 74 S	03 20 74 %C	03 20 74 ALGAL UNITS PER ML	05 29 74 S	05 29 74 %C	05 29 74 ALGAL UNITS PER ML	08 21 74 S	08 21 74 %C	08 21 74 ALGAL UNITS PER ML
PEDIASTRUM TETRAS V. TETRAODON	COL						X		0.3	325
PENNATE DIATOMS	CEL	1	40.1	3772						
PERIDINIUM	CEL								0.3	325
PERIDINIUM PUSILLUM	CEL		0.8	73						
PERIDINIUM QUADRIDENS	CEL					0.1	89			
PHACUS ACUMINATUS ?	CEL									X
PHACUS ANOMALUS	CEL						X			
PHACUS GLABER	CEL									X
PHACUS MEGALOPSIS	CEL						X			X
PHACUS PSEUDONORDSTEDTII	CEL									X
RAPHIDIOPSIS CURVATA	FIL							4	7.6	9600
SCENEDESMUS #2	COL								0.1	163
SCENEDESMUS ABUNDANS	COL						X		0.1	163
SCENEDESMUS BICAUDATUS	COL						X			X
SCENEDESMUS DIMORPHUS	COL					0.1	89		0.1	163
SCENEDESMUS OBLIQUUS	COL									X
SCENEDESMUS PROTUBERANS	CEL					0.5	621			
SCENEDESMUS QUADRICAUDA	COL					0.2	266		0.4	488
SCENEDESMUS SPP.	COL	4	9.0	843						
SCHROEDERIA SETIGERA	CEL					0.1	177			
SPERMATOZOOPSIS	CEL		1.2	110					1.7	2115
STEPHANODISCUS	CEL						X			
STEPHANODISCUS ASTRAEA	CEL									X
SURIRELLA	CEL		0.4	37						X
SURIRELLA LINEARIS	CEL						X			
SYNEDRA	CEL								1.6	1952
TETRAEDRON GRACILE	CEL						X			
TETRAEDRON MINIMUM	CEL		0.4	37						
TETRAEDRON MINIMUM V. SCROBICULATUM	CEL					0.6	798		0.5	651
TETRAEDRON MUTICUM	CEL					0.1	177		0.3	325

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CONTINUED

TAXA	FORM	03 20 74			05 29 74			08 21 74		
		S	%C	ALGAL UNITS PER ML	S	%C	ALGAL UNITS PER ML	S	%C	ALGAL UNITS PER ML
TETRAEDRON REGULARE	CEL					0.1	89		0.1	163
TETRAEDRCN REGULARE V. INCUS	CEL		0.4	37		0.1	89			X
TETRASTRUM HETERACANTHUM	COL					0.1	89			
TETRASTRUM STAUROGENIAEFORME	COL								0.1	163
TRACHELCMCNAS	CEL		0.4	37						
TRACHELOMONAS #1	CEL									X
TRACHELCMONAS VOLGENSIS	CEL						X			
TRACHELCMCNAS VOLVCCINA	CEL					0.1	177			X
TREUBARIA SETIGERUM	CEL									X
TREUBARIA TRIAPPENDICULATA	CEL					0.1	177			
TOTAL				9415			134221			125610

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